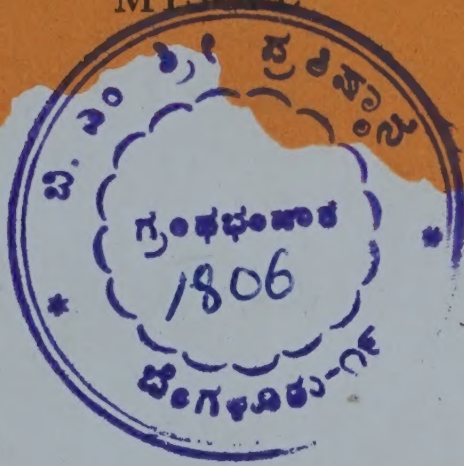




PRASĀRĀNGA
UNIVERSITY OF MYSORE
MYSORE



MYSTIC AWARENESS

Four Lectures on the Paranormal

133.8
RAM

K. RAMAKRISHNA RAO
Andhra University

MYSTIC AWARENESS



Special Lectures Series

MYSTIC AWARENESS

Four Lectures on the Paranormal



K. RAMAKRISHNA RAO

Andhra University



PRASĀRĀNGA
UNIVERSITY OF MYSORE
MYSORE

First Published 1972

133.8

RAM

12258

© University of Mysore

ಬಿ. ಎಂ. ಕೆ. ಸ್ವ. ಕೆ. ಸ್ವ. ಸ್ವ. ವ
ಗ್ರಂಥ ಭಂಡಾರ
ಕ್ರಮ ಸಂಖ್ಯೆ 1806
ವರ್ಗ
ವರ್ಗ ಸಂಖ್ಯೆ
ಬಿಡುಗಡೆ ತಾ. 14-8-85
ಬೆಲೆ Price Rs. 5.00 Indian Edition
Foreign \$ 2.00 Inclusive Postage

PUBLISHED BY THE DIRECTOR
PRASĀRĀNGA UNIVERSITY OF MYSORE, MYSORE

WITH PROFOUND ESTEEM AND REGARDS

TO

SRIMATHI SAMYUKTHA

AND

SRI L. BULLAYYA



PUBLISHER'S NOTE

We are extremely happy to present 'Mystic Awareness' by Sri K. Ramakrishna Rao to the public in the present form.

We are under a deep debt of gratitude to Professor Ramakrishna Rao who kindly accepted our invitation to deliver a series of lectures and permitted us to present them in the book form.

We are also thankful to M/s Wesley Press, Mysore for the good printing.

PRABHU SHANKARA

Director

PREFACE

I gave these lectures in March 1969 at the University of Mysore. They are meant primarily for the educated laymen and fellow psychologists in India who have not been exposed to the field of parapsychology but are curious to know what this field is about. These lectures do no more than introduce the reader to a scientific study of the parapsychological phenomena and refer him to further literature for a more comprehensive understanding of this subject.

Parapsychology in India is a much abused word. Stage magicians, hypnotists, pseudo-scientists and a host of others, whom I find it difficult to classify, have all made claims to parapsychology. It is one of the many paradoxes one encounters in this country that parapsychology is pursued as a serious university study with highest possible standards at one end and that it is also practised by crackpots and charlatans at the other. If these lectures could clear up the mist that surrounds parapsychology and help give it a correct perspective, as it is seriously and scientifically studied around the world, this book would have served its purpose.

I acknowledge my gratitude to the University of Mysore and specially to Prof. B. Krishnan, Head of the Department of Psychology, and Dr. Prabhu Shankara, Director of Prasara-ranga for inviting me to give these lectures and for encouraging me to publish them. I am thankful to Miss P. Sailaja for helping me in the preparation of the manuscript, Miss Pramila David for correcting the Proofs and to my secretary Mr. D. V. K. V. Achary for typing it.

*Dept. of Psychology and Parapsychology
Andhra University
Waltair*

K. R. RAO

CONTENTS

	PAGE
PREFACE	vii
LECTURE I	
MYSTIC AWARENESS	3
LECTURE II	
SOME LABORATORY STUDIES OF ESP	31
LECTURE III	
HYPNOSIS, DRUGS, YOGA, AND ESP	61
LECTURE IV	
PARAPSYCHOLOGY AND THE PROBLEM OF SURVIVAL	81
SUGGESTED READINGS	104
AN APPEAL	105
GLOSSARY	106



LECTURE I
MYSTIC AWARENESS

LECTURE I

MYSTIC AWARENESS

I

Science begins in man's experience. It arises as a quest to appease anomalies found and incongruities observed in thought and action. It may help to reduce felt tensions or quench aroused curiosities. There can be no science devoid of human experience. We know the world through our experiences of it. Therefore, the process of experiencing and the varieties of experience ought to be understood for a proper appreciation of scientific activity. The science which deals with experience itself, the ways and means of experiencing is psychology. In physics we deal with matter and energy which are apparently independent of the experiencing person. But in psychology we find, not infrequently, the same stimulus eliciting different responses, suggesting that response is also dependent on the person.

If a rubber ball bounces up by hitting the ground while a piece of rock does not, here is an incongruity of experience that can only be resolved by postulating a set of physical laws. If a person reacts sharply to an abuse hurled at him while another person pockets a similar insult unruffled, we have a comparable experiential anomaly that needs to be explained. The reason why the science of psychology which is intrinsically so important to man has not taken as firm a hold as the science of physics lies in the fact that the investigation into and the understanding of the reasons for divergent behaviour patterns of humans are made difficult manifolds by a number of interacting variables that prevent a simple statement of law. The so-called subjectivity inherent in human experience

is but a confession of our failure to identify and control relevant variables.

The difficulty in identifying these variables partly consists in the failure to distinguish between varieties of experience. The so-called 'objectivity' often means simply fitting the phenomena of experience into familiar categories. There has been a category of experience that eluded 'scientific' explanation for centuries. It is the psychic, paranormal, or psi as it is variously called in which the individual becomes aware of or responds to influences in ways that cannot be accounted in terms of our sensory awareness. These experiences are *prima facie* incongruent with the common sense conception of the way we acquire information. In spite of the fact that experiences of this sort were noted throughout the history of mankind, people tended to believe in them as miracles or to dismiss them as fraud. But an inquiry into them is legitimate, necessary and scientific, because they pose a serious anomaly in our conception of man and the ways in which he acquires information.

During the last half a century psychologists have achieved a measure of success by adopting the explanatory models obtained in physical and biological sciences. This led to not only the belief that all of human experience can be accounted in terms of laws comparable to those obtained in other sciences but also that there can be no valid experiences that *a priori* conflict with the apparent laws of natural science.

This state of affairs leads to a predicament, which I call the psychologist's predicament. Psychology studies the subjective characteristics of experience. There would be no psychology, as we know it today, if the human being reacts to stimuli acting on him the same way a chemical does when it comes into contact with another substance. It is the potential variability of a response which makes it essentially human. Therefore, any attempt to explain human behaviour in terms

of simple mechanical laws involves the denial of a great deal that is primarily psychological. But if we admit that human behaviour cannot be accounted in terms of laws comparable to those found in other sciences, it is feared, there may be no science of psychology at all.

The way to avoid this predicament, it seems to me, consists in postulating various levels of experience which are governed by laws peculiar to those levels, but not in reducing all experience to a level amenable to easy prediction. I find it necessary to distinguish between four different levels of experience. First of all, there is a level of human experience that deals with the basic needs of survival and procreation. At this level human experience is determined by reflexes and habits that are comparable in a large measure to the behaviour of animals. In a sense this level of experience is primitive and we begin our existence at this level. Consequently even those processes the individual develops as he matures are greatly influenced by this. It is at this level, experience can be reduced to S-R formulas and explained on models borrowed from natural science. The second level of experience emerges with the development of the ego. The needs of love and belonging, self-esteem and regard, relate to this level of experience. This is a level where feeling and emotion dominate. Vanity and ambition show their ugly influence. The individual psychological needs emerge and dominate behaviour. Then, there is the group level where the ego needs to transcend the individual and find identification with and fulfilment in others. It is also the level where the individual's psychological needs might come into conflict with group needs with the result he develops different kinds of defence mechanisms. The final level of experience is what may be called the mystic experience. At this level, the individual transcends both the ego needs and group demands and finds himself. He begins to understand the secrets of him-

self and his relation to nature. He may have experiences that change his outlook, give new insights and reveal knowledge which is otherwise unobtainable. He may experience ecstasy and obtain knowledge that cannot be attributed to known causes. This is possible because the human being comes into contact with or gains access to a new form of reality or a new source of information.

The revelations of prophets, seers and saints, the source of creative genius, and the mysterious phenomena that unaccountably occur among ordinary men, I assign to the category of mystic experiences. I further suggest that common among the various kinds of mystic experiences is an information source that seems to be radically different from others known to us. I call this source mystic consciousness. The information obtained through this source is subject to diffusion and refraction and in the process distortion at other levels of experience.

Occurrence of paranormal experiences is reported throughout the recorded history of mankind. In India references to such experiences are found from the time of *Svetasvatara Upanishads*. In fact as early as third century A.D. a systematic treatise has been written up by Patanjali which describes the practices that seem to have been current at that time for achieving the development of consciousness which permits such experiences. It was a common practice in the old days, we are told, to undertake *tapas* towards the resolution of certain problems. *Tapas* apparently gave them enlightenment and insight into myriad problems. It even enabled some people, we are told, to acquire powers involving new energy systems. Lord Buddha meditated under the *bodhi* tree until he received enlightenment and insight into the nature of man's ills. Similar experiences are also attributed to prophets like Mohammed.

Now the question is whether any such source exists at all or whether the narrated accounts are nothing but the creation of some imaginative persons. Apart from these stories are there any experiences that do not fit into our 'rational' comprehension of ourselves, and therefore, are paranormal and necessitate our hypothesizing about a new source of information? Is it possible to identify and define the source of these experiences in operational terms and encounter it in a laboratory situation? What then is the nature of mystic or paranormal experience and what is its evidential status as it stands today? I shall attempt to answer these questions and possibly draw some implications of the empirical findings bearing on them to our understanding of the nature of man.

II

In the category of mystic experiences we may include all cases in which knowledge is obtained without any awareness of its source, or when it is attributed to a source which cannot be validated in terms of known channels. At one end of these experiences are what are traditionally described as mystic, the intuitions relating to man and his destiny, and at the other are the mundane psychic experiences or flashes of supernormal cognitions, such as the sudden awareness, either in dream or in waking consciousness, of an impending catastrophe or even an uneventful future occurrence which cannot be explained away as a meaningless coincidence. In-between, there are a variety of occurrences involving the scientist's intuitions, the artist's creative spurts and a successful man's hunches. All these experiences have one thing in common, viz., they are marvels in the sense that how they occur is not known and cannot be explained in terms of normal causes. Decisions are taken and conclusions reached on the basis of premises not known at the time to the individual concerned. Commonsense conception of cause-effect

relationship between stimulus and response no longer holds as the connecting links in the causal chain are missing.

There are usually two ways in which hypotheses occur to scientific thinkers. Sometimes they are patiently and consciously led, step by step, by the observations of phenomena and the results of other studies, to generalizations concerning them, which are also predictive of phenomena to be ascertained in future. Scientists also report that sometimes a sudden insight into the nature of certain phenomenon occurs to them. Their further work then consists in systematically developing the idea and deductively deducing evidence for it. It cannot be reasonably maintained that the insight itself is caused by the awareness of the problem by the scientist, because the scientist does not report any such awareness. To argue that the scientist must have 'noticed' the relationships at the level of the unconscious adds little to our understanding of the scientist's insight. May not the insight itself be a manifestation of mystic consciousness?

We know that the scientist requires something beyond mere intellect. Writing on the intellectual abilities of *Six Great Scientists* Crowther tells us, 'Newton was ordinary, Darwin was considered backward, and Einstein sub-normal.'¹ One great factor that is common among the great scientists, we are told, 'was the imagination to conceive a great idea.' Introducing the English edition of Poincaré's book *Science and Hypothesis*, Professor Laumour says, 'The aspect of the subject which has here been dwelt on is that scientific progress, considered historically, is not a strictly logical process, and does not proceed by syllogisms. New ideas emerge dimly into intuition, come into consciousness from nobody knows where, and become the material on which the mind operates, forging them gradually into consistent doctrine, which can be welded on to existing domains of knowledge.'²

An interesting case of a great scientist whose discoveries,

emerging from little or no formal training, baffled the commonsense canons of discovery is our own illustrious mathematician Ramanujan. Professor Hardy who took Ramanujan to England and worked with him for a number of years characterized Ramanujan as

a man whose career seems full of paradoxes and contradictions, who defies almost all the canons by which we are accustomed to judge one another, and about whom all of us will probably agree on one judgement only, that he was in some sense a very great mathematician.

. . . He was, at the best, a half-educated Indian; he never had the advantages, such as they are, of an orthodox Indian training; he never was able to pass the 'First Arts Examination' of an Indian University, and never could rise even to be a 'Failed B.A.'. He worked, for most of his life, in practically complete ignorance of modern European mathematics, and died when he was a little over thirty and when his mathematical education had in some ways hardly begun. He published abundantly—his published papers make a volume of nearly 400 pages—but he also left a mass of unpublished work which had never been analysed properly until the last few years. This work includes a great deal that is new, but much more that is rediscovery and often imperfect rediscovery; and it is sometimes still impossible to distinguish between what he must have rediscovered and what he may somehow have learnt. I cannot imagine anybody saying with any confidence, even now, just how great a mathematician he was and still less how great a mathematician he might have been.³

How did Ramanujan achieve what he did? According

to his biographers: 'Ramanujan used to say that the goddess of Namakkal inspired him with the formulae in dreams. It is a remarkable fact that frequently, on rising from bed, he would note down results and rapidly verify them, though he was not always able to supply a rigorous proof. . .'⁴

Professor Ranganathan reports the following case in his biography of Ramanujan:

In November 1913 I was the only student in the Post-graduate honours class in Mathematics of the Madras Christian College. Ross was my only Professor. We used to meet nearly three hours a day. One morning he entered the class-room with his eyes glittering and his lips throbbing. He asked me, 'Does Ramanujan know Polish?' I replied that it was not at all likely. The Professor said, 'Even if he did, it will make no difference.' I was puzzled by this laconic remark of the Professor. Then he pulled out from his pocket a university envelope stuffed with a bunch of sheets. He threw the sheets open before me and said, 'This is the quarterly report of Ramanujan as a research student of the university. Look at this beautiful theorem. In the issue of a Polish periodical brought by today's mail, something of this kind appears. Surely, Ramanujan could not have divined what that Polish mathematician was thinking. What is more, Ramanujan's theorem is much deeper. Ramanujan has certainly anticipated the Polish mathematician. He is extraordinary. Is he not?'⁵

I have referred at some length to Ramanujan in order to focus on what is apparently the paranormal operating in his mathematical activities. While some may question whether the Ramanujan phenomenon can be referred to as evidence of the paranormal, it would not be difficult to see that, assuming the possibility of the paranormal on the basis of other

evidence, the paranormal hypothesis is the simplest and most parsimonious explanation of the startling discoveries of Ramanujan. Consider, for example, its similarity to the following case reported to me by a person who is known to me personally.

This is an experience recorded by him and reported to have occurred on 28th June 1940.

I was intending to go to Bezwada on 29th morning to do some work for a firm with which my friend Mr. S. K. Subrahmaniam is importantly connected. At dawn of 28th night, I heard the usual 'voice' 'Mr. S. K. S. is dead.' I felt very sorry, commented on the sudden end, and also on the large number of people whose living was in his hands, who will now be thrown over in all probability—all this during the experience. Then, the voice seemed to laugh light-heartedly and said 'It is not so bad as all that.' I remembered this experience clearly again at 7 a.m. and thought it was a freakish idea due to my projected journey that morning, connected with Mr. S. K. S. The daily paper that morning was seen by me at 8.30 a.m. and there, the obituary notice was given of Mr. S. K. Subrahmaniam, but this is altogether a different gentleman connected with an Insurance Co. in Ceylon, of whose existence even I was not aware!

The similarities between Ramanujan's case and the one narrated above are obvious. Ramanujan, it is believed, obtained his formulae in dreams with the inspiration of the goddess of Namakkal. Our friend heard 'the usual voice' informing the death of Mr. S. K. S. In both cases partial verification is obtained in published reports. What is even more important, both these experiences went beyond what is contained in the reports. In other words, they are developments over or distortions of the reports. Ramanujan's theorem

was much deeper, and the S. K. S. who was dead was a different man.

III

It would be worthwhile to consider when and how the paranormal might play a role in scientific discovery. I shall therefore attempt briefly an analysis of the logic of scientific discovery.

It is sometimes said that science leads us from the known to the unknown, from the particular to the general. The scientific endeavour is usually a two-phased affair involving, to use familiar concepts, both induction and deduction. A set of observations occasions a generalization embedded in what is ordinarily dubbed as a new idea in so far as it goes beyond these observations and predicts possibilities for further observations, a fulfilment of which constitutes its verification. This process of verification involves deduction.

In a sense deductive reasoning can give us nothing essentially new, it only makes explicit what is implied in the general idea. Thus the deductive process of verification is analytical and the conclusion leads to nothing significantly new because it is already contained in the premises. On the other hand, the inductive process which enables us to reach a generalization, unless it be perfect enumeration where each of the members of a class are observed before arriving at a generalization, involves a 'leap' from the known to the unknown.

The two kinds of thought processes involved in deduction and induction can be psychologically distinguished as thinking and imagination. Thinking is objective and therefore can be judged. Imagination is subjective and therefore unpredictable. Thinking can be formalized, while imagination can seldom be so clipped. Imagination is free and

creative, while thinking is a discipline chained by the relevant premises as well as the rules of logic.

Now, if it is agreed that sometimes a scientific discovery is made without the sequential steps of being guided by a set of observed data, because a scientific intuition is ~~not~~ suggested as a logical step by the available data, we would have to assume that either the sequential steps are worked out in the unconscious or we should credit our imagination with the ability to arrive at an intuition without any phenomenal base. The latter is tantamount to bestowing the imagination with paranormal powers. This, however, at this stage could only be a guess, and we need to establish a definite relationship between the paranormal and the imagination to make this hypothesis more credible. Alternatively, if we locate the missing links in the unconscious, we will then have to explain how they are available to the unconscious. In cases such as Ramanujan's, we cannot reasonably assume that Ramanujan did in fact learn these theorems or the problems leading to them prior to their discovery by him. The fact that Ramanujan's discoveries are a puzzle to many is precisely because of the lack of any evidence that would thus locate the sequential steps. Therefore, we would have to assume either that scientific intuition is itself paranormal or that the base data leading to the intuition are obtained by paranormal means at the level of the unconscious. Based on these data, imagination projects the hypothesis which reveals itself as an intuition. This argument makes three assumptions. First there is such an ability called paranormal; second it is unconscious, and third, imagination can be activated and guided by the unconscious. I believe there is evidence in favour of all the three assumptions.

It may be admitted also that a scientific intuition may manifest without the exercise of the imagination, when for instance, the insight itself is obtained paranormally. In other

words, what appears as an intuition may not necessarily mean that the individual having the intuition has the requisite imaginative ability to construct a scientific hypothesis on the basis of some data. It could simply be an idea transferred paranormally from the mind of a creative man who formulated it, or one obtained paranormally from a recorded document, a book, a periodical article etc.

Sometimes it may also happen that what the scientist becomes aware of is a certain inexplicable phenomenon on which he stumbles 'imaginatively' and works backward to a general idea. In such a case we will have to assume again that the general idea, i.e., the hypothesis, was obtained paranormally and held in the unconscious and that the specific idea is simply deduced at the unconscious level. All this makes sense only if we can be reasonably certain about the paranormal.

IV

I shall now present to you a series of experiences reported to me by an elderly gentleman who is personally known to me. I have given you earlier one of his ostensibly paranormal experiences. His name is Sri I. Nagabhushana Rao.* He is living and aged seventy. Engineer by training, he worked as a self-employed contractor until his retirement. He is known for his wide learning, high integrity and phenomenal memory. Several of the experiences I am now going to give you were recorded at the time of their occurrence or subsequently and some were written at my request from memory.

It should be pointed that our friend did not have any spiritual or yogic training, much less does he claim any special supernormal powers. He is not, however, a naïve

* Thanks are due to Sri I. Nagabhushana Rao for permitting me to use his experiences in these lectures.

person as far as parapsychology is concerned. He is well-informed and read much of the stuff that came from the Society for Psychical Research, including the writings of Sir Oliver Lodge and others.

Experience No. 1

I was in bed, suffering actually, post-operative pain in the rectum. A relative of mine came to see me at about 10.30 a.m. and suggested that I may consult some other surgeons. I replied that if the new consultation suggested a new course of treatment, we have to decide whether to abide by that. So as to illustrate my point, I said 'imagine that you came to Madras now to consult the Advocate "X" whether a certain suit should be filed as a suit for a settled ac/- or for settlement of accounts etc.'—my relative pulled me up and said 'Queerly enough, what you describe is, in every detail, the purpose of my present trip. How did you know?' I did not, of course, know anything about his business, had no means of guessing nor was 'X' his usual senior advocate.

Similarly, about the 10th June 1938 my friend was talking to me at 11 a.m. and, by way of illustrating a certain view point, I casually said 'just imagine yourself coming to see me, now, direct from a swamiji of the Ramakrishna Mission. . .' My friend pulled me up and said that he was really coming from a swamiji and wondered how I knew!

Again, for over 3 months past (April to July 1938), such coincidences, like my discussing a certain topic with a friend at 8 p.m. and exactly the same topic being discussed by another group, coming to see me specially to discuss the particular topic, an hour or two latter. These have become so common that they scarcely

attract serious surprise nowadays. None of these have any direct personal advantage attached to the experiences!

Do these experiences really suggest a source of information distinct from those we know and accept? The relative's surprise and his question 'How did you know?' are common-sense indicators that the experience is indeed out of the ordinary and that the usual ways of knowing do not adequately explain it. But our learned friend himself described these experiences, perhaps advisedly, as 'coincidences.' And we can agree that this is a possibility. 'X' could have been a well-known advocate, and this might explain both the reason for our friend referring to him and for his relative's thinking of consulting him. Again the common reference to the *swamiji* could be a simple coincidence. When we discuss we do give so many examples and analogies and if some turn out to be interesting as in these cases we tend to remember them while forgetting many others. Therefore, it will not be entirely unreasonable to say that these experiences themselves do not necessarily suggest and much less prove the existence of a new source of information. They can be simple coincidences, interesting in themselves no doubt, but not sufficient to suggest a new information source, even though the frequency of their occurrences does leave a question mark in our minds.

Consider again the following experience.

Experience No. 2

About 1-30 in the day, I was lying in bed, wide awake and reading a book. Suddenly I began to picture before me Mr. B. S. a friend of mine, with his children grouping around. I said to myself that B. S., who lost his wife an year back and remarried, was rather unhappy because he was doubting the wisdom of the

second marriage; that he should try and be calm and cheerful, reconciling himself to the facts of life. Just then, a car stopped in front of my house and the day-dream broke up; and I came out to see my friend B. S. in the car. It was neither usual nor to be expected that he would visit me then. He told me that 5 minutes previously, he suddenly thought of seeing me and deviated from his planned course. His topic of conversation was what I day-dreamed about; he felt very relieved and cheerful when he left me, after 15 minutes.

The above case is quite impressive on the whole. But once we begin to analyse it we find that the coincidence hypothesis is not very far-fetched. There is nothing unusual in our friend INR thinking about Mr. B. S. who is his friend. Nor is it unusual to picture him as being unhappy because of the second marriage under those circumstances. It is also not extraordinary that Mr. B. S. came to see our friend and that he felt better after the conversation. Knowing Mr. Nagabhushana Rao as I do, I can imagine how effective a counsellor he could be. What is unusual perhaps is that Mr. B. S. should visit our friend at that particular time when he was thinking of him. But reduced to this the coincidence loses much of its apparent significance and can be attributed to chance without assuming any cause-effect relationship between the two events. If we keep a check on our experiences, I am sure, we can point out to a number of experiences of similar nature which pass on for meaningless coincidences.

Mr. INR had the following interesting experience about 29th December 1935.

Experience No. 3

About 10.30 p.m., I was with a party of two other friends travelling near Bijapur in a second class com-

partment. I was clearing up my bed on the upper berth, when suddenly, a thought flashed across my mind that Lord Reading was dying! I told my friends then and there what I felt and they laughed, naturally because we had not read a newspaper the previous three days nor were we sufficiently interested in what may happen to Lord Reading. The incident was forgotten but two days later when we saw the paper, we read of the passing away of Lord Reading. We were not discussing politics nor psychical phenomena nor any personalities when the thought above occurred to me.

Again, coincidence? Perhaps. I was unable to ascertain whether the time of Lord Reading's death coincided exactly with the time of our friend's experience. If it did, it would be difficult to dismiss it as a chance coincidence, since the probability of such a coincidence would be very very small indeed especially if Lord Reading was not known to be sick. It is unfortunate that our friend did not record the date and time of Reading's death. I am sure, we could surely find out the information relating to Reading's death from the old newspaper files. But, I must confess, I was not able to get this information so far.

But here is an example which does not seem to fit our coincidence hypothesis so easily.

Experience No. 4

This happened in 1931 or thereabouts. I have a friend whom I knew well from 1913 onwards. He is still alive (73 years). I shall refer to him as K.P. He has a 2 years certificate in agriculture from Coimbatore College (latter he took his B.A. degree and teacher's training). From about 1923 onwards, we were surprised to find that, any time I asked him to apply

for a job, he would surely get it. One day we saw an advertisement for an agricultural superintendent for a big sewage farm in a big industrial city. The qualifications required were not possessed by my friend. Still, I suggested to my friend to apply for it and he did. To our pleasant surprise, he was asked to appear for an interview by the employer.

A day or two before he was due to entrain for the interview, his mother became seriously ill and I felt it was a serious, even fatal, illness. So when he asked if I advised him to go for the interview I said—your mother may not survive this illness; but you should not miss this chance to get a good job. The final decision is yours. He decided to go for the interview. His father was very upset and angry and wanted my friend (who was the eldest son of the family) to cancel his journey but my friend insisted on going. So, I was blamed for the decision!

At the Railway platform, a few minutes before the train arrived, I had a sudden 'vision' at 9 a.m. in broad day light. I saw a 'Board of Interviewers', numbering four and one of them asked my friend—we have 800 acres farm. Can you manage it? After a minute or two, recovering my normal mind, I told my friend—the board will consist of so many persons, described them generally and said 'they will ask you if you can manage a farm of 800 acres etc., etc. You tell them that you can manage only 150 to 200 acres single-handed; but with a full complement of subordinates, you will give your best service to meet their requirements.' My friend naturally laughed it away. But when he met the Board about 50 hours later, he was struck by the number of Board members and how they answered my description of them correctly. So when

the identical question was put to him, he readily gave the answer he was tutored to give by me before he entrained. His mother died the evening he left and I was specially the target of much family curses! Four days later, my friend returned and was terribly impressed by the description of the Board and the questions put by the members to him. About a fortnight latter, he got orders giving him the job and he worked there the next 25 years and rose to a fairly high status there. This applicant was preferred to many others of superior academic qualifications, because his answer to the question impressed them as 'practical and realistic' approach.

This is an extremely impressive experience. The case involves a series of incidents which are based logically first on the 'intuition' of our friend concerning the possibility of employment as well as the 'vision' in which he apparently pictured the whole interview. That the number in the interview board, their being of the same description as given by our friend, their asking a particular question of singular importance, and the matching of the number of acres of the farm are simply too extraordinary to be regarded as chance coincidences.

If chance is ruled out, is there any other alternate hypothesis to mystic awareness that would explain his experience? It is sometimes argued that human testimony is so fallible that well-meaning and honest individuals tend to exaggerate, distort and recreate, often without being aware, old situations in such a way that the original experience and the latter account of it vary and vary in important respects.

A friend of mine whom let us call DN recounted the following case from his own experience. His father, I believe, told him that a friend of his reported that he witnessed the

following. He along with others went to see a magic show scheduled at 9.00 p.m. But the magician did not appear until 12 o'clock. When he did arrive, he said 'Gentlemen, do not be angry that I am late. It is just 9.00 p.m., please look at your watches. The audience looked at their watches, and their watches showed only 9.00. Then the magician said 'that is the trick for the night gentlemen; Good night!'

Now, DN went on to say that he began after sometime saying that his father told him that he himself saw this show. And after a further lapse of time he even said that he himself was with his father when this happened. DN narrated this to show how unreliable is human testimony. I agreed with him and I complimented him for his frankness in admitting this, even though someone might wonder whether this confession itself might not be due to his motivation to prove a point. Whatever it is, I recognise that this is a distinct possibility, and happens sometimes consciously and unconsciously at some other times. Being aware of this possibility, perhaps with a little bit of sneakiness that the scientists of my tribe are made to acquire, I asked our friend Sri Nagabhushana Rao to narrate to me the same story at various times and finally requested him to write it down for me which he graciously did. I am struck by exactly the same account given to me on these various occasions. In spite of my closely watching for any variations, I could discover none that would have altered the experience in any significant respect. I, therefore, tend to discount the possibility of any unconscious distortion of the actual event in this experience.

There are two things that I find remarkable in our friend's experiences. One is their sheer number, and second the lack of any general benefit to him, but sometimes significant help to others. In the above narrated experience, we see how K.P. was helped. Here is again another instance in which he was able to render similar help.

Experience No. 5

This experience centres round a Mr. P. V. K. whose acquaintance I made a few years earlier but more or less superficial. He was a science lecturer with an M.Sc. 1st class, aged about 50 years in 1956. One day he came to me to show his appeal to his departmental head to plead for a just disposal of his claims for promotion. I told him I was stranger to his departmental rules but from my point of view, his case will be favourably disposed. In a light vein, I gave a chit writing down my 'disposal'. He laughed and said it can never be so and that I was doing some 'wishful thinking' because I liked him.

Three or four days later, he was surprised to get an endorsement from his supervisors, almost 'word for word' what I wrote in my chit! This impressed him very much and he began to tell common friends that I had some psychic powers! I never discussed this with him or others.

A few months later, at 7 a.m. when I was still sleeping, he came to my house agitated. He went away as I was sleeping but came again at 7.30 a.m. more agitated and yelling out my name. When I met him, he wailed, touching my feet—sir, you have saved me and my family. I saw he was raving and wanted him to quieten down and tell me what happened.

His story was as follows: At about 5 a.m. he 'dreamt' that I woke him up from sleep and warned him to attend to his wife who is generally ill. He woke up, saw his wife sleeping on an adjoining cot 'peacefully'. He dismissed the 'dream' as a fantasy and because it was daybreak, he got up, saw the children making coffee and went to the latrine. At the door he heard a distinct voice which he identified as mine and heard

‘why are you foolhardy and not take my warning? Attend on your wife at once’. He was fully awake now and so greatly agitated, went to his wife’s cot. She was covered by a blanket and when it was removed, was found her to be heavily bleeding in her 8th month of pregnancy due to miscarriage. He ran for a lady doctor who remarked on seeing her, that a delay of another half an hour would have been a calamity and beyond any medical help.

‘This made this gentleman attribute truly the warning to me. Not all my protests that I was totally unaware of any aspects of the episode and I was not even aware of her being pregnant were of any avail. I told him I could not be a conscious author of his warning when I am unaware of it. No, he insisted that but for my warning, it would have been a family bereavement and so on!

This is an extremely interesting and unusual case. The man who had the experience attributes it to the agency of our friend INR who disclaims any awareness of it. There are of course two possibilities. One is as Mr. P. V. K. supposed, our friend might have paranormally intervened, without himself being aware of it. The other possibility is that P. V. K. himself had a paranormal experience and that he himself was the agent. Since he believed in our friend having ‘psychic powers’ because of earlier experiences, his own unconscious staged the dream in which our friend became the acceptable hero.

This problem of agency raises several questions relating to the communication itself. If there is an external agency involved, is it a living agency, as our friend in this case, or do disembodied spirits also, if they exist, effect similar communications. INR has some experiences bearing on this problem.

Experience No. 6

This episode occurred in 1947 or thereabouts. The party I shall refer to as V.S.P. V.S.P. was a class fellow of mine in my high school and we knew each other fairly intimately, though our attitudes to life were markedly different. He was an orthodox brahmin, a student of astrology; a graduate in arts (philosophy) and a high school teacher. He became an invalid for about 15 years before he passed away, of which the past 3 or 4 years we were meeting almost daily. On the day of his passing away, I saw him at 10 a.m. and felt it was his last day of living. At 2 p.m. I had intimation of his being in the last gasps, I saw him later pass away. His body was removed to the cremation ground about 5 p.m. and I could not go to the cremation, because his wife was alone in the house, they had no children and no near relations to be with the widow. So I stayed back to arrange for an elderly woman to stay with her the night and keep her. At 7 p.m. or so, I returned home and was getting ready for my bath. Just before I commenced my bath, I was saying to myself, without actually uttering any words 'V. S. P., this is my bath to pay my homage to your memory'. Just then, I 'heard' his voice in Telugu 'Look out, there is a scorpion'. Here, I must record that his voice and the drawling way he would speak were extremely characteristic and none of us could imitate him even approximately. I jumped at this voice but thought it was my imagination as he (V. S. P.) was just then occupying my mind prominently. A few minutes later, I heard the 'voice' a second time more insistently 'a scorpion near your left toe'. I asked for a hurricane light in addition to the bulb already lighted in the open space. I found a

big scorpion barely four inches from my left foot toe! I watched the scorpion for nearly 5 minutes to allow to go away, but it did not move and then I killed it.

Here, subjectively speaking, the 'voice' was unmistakably the Dead Man's and the method of speaking too was very characteristically the Dead Man's.

As we have remarked with reference to experience 5, it may be said that the real agent is the experiencer himself and that the drama of the dead voice is merely one staged by the unconscious. It is not unreasonable to assume that the whole experience is a hallucination which is triggered by the paranormal awareness of the scorpion being around. The fact that our friend 'heard' the characteristic voice loses its significance, when we consider the fact that he himself regarded it a hallucination before he really discovered the scorpion. This does not, however, mean that we are, at this stage of discussion, dismissing the possibility of a dead man communicating to us. The question is still open whether the dead person communicated the fact of the scorpion or whether it was a subliminal or extrasensory perception of our friend.

Now consider another case which is not only different in origin, but one which was deliberately obtained.

Experience No. 7

I had a friend of my boyhood, whom I will call B.P. for this record. As children of 9 and 10 years we were attached to each other; his was a fairly well-to-do family of non-brahmins. From my 11th to 16th year, we could contact each other only by a few letters as we were living in different towns. But during 16th and 18th years, we were again class-mates and resumed our old intimacies though less manifest. In 1918 he left for England and used to write to me about once

in a fortnight. In 1920 or so he passed away in England, due to T.B. of lungs. A month or two before passing away, he wrote to me that he was returning to India, but the very next day, countermanded it, saying he was staying on in England, after consulting experts.

While I was doing the planchette experiments, I 'invoked' B.P. and had a quick response. He gave me some graphic details of his last moments in Royal Infirmary Glasgow and suddenly asked me, 'Did you not receive my last letter just before I passed over? It is an unfinished, unsigned letter but I clearly remember addressing to you. At the time I got this 'spirit message', I was greatly impressed and even mentally agitated; it was such an intimate 'feeling' that the message evoked in me. A few weeks latter, I had the shocking surprise of my life when his (B.P.'s) people in India, (who received from Glasgow the personal belongings of their deceased relative) sent me the 'unfinished, unsigned letter' addressed to me by the deceased! The date thereon was the day of his passing but if I remember right there was a cheerful note in it, with a vague premonitory ring in it that we may not meet again in this life!

This is another ostensible communication from the deceased. But again is it necessary to assume that the communication came from a deceased spirit? Is it not much simpler to merely attribute to our friend what we called mystic consciousness which enabled him to obtain information of this sort? Suppose he had a dream or vision in which he saw his friend writing the last letter to him containing the same information, could he then have spoken of the spirit? It is clear that spirit communication in this case can only be

a hypothesis, a hypothesis not necessarily suggested by the experience itself, but one underlying the tool that had been employed, viz., the planchette.

I shall not go into any further discussion of this problem at this stage. I just want to conclude this lecture by pointing that there are some real experiences which are manifestly inconsistent with the so-called 'scientific' conception of ourselves. To mention one such which conflicts with experiences narrated above, 'It is impossible for a person to perceive a physical event or a material thing except by means of sensations which that event or thing produces in his mind.'⁶ The experiences of our friend suggest otherwise. Hence the anomaly that could be resolved only by further scientific exploration into these experiences.

Of course one could avoid the anomaly by refusing to look at these experiences, or by explaining them away as deliberate or unconscious fraud. This is a poor way of dealing with the problem. The scientist who chooses this line is no better than the dogmatic philosopher who refused to look through Galileo's telescope. The duty of one who takes any scientific interest in the problem of this sort is to find out (*a*) whether such experiences do occur, (*b*) if they do, is it reasonable that they are mere coincidences within the bounds of probability, and (*c*) if not, how could they be explained.

I hasten to point out that I have not offered the experiences of our friend as conclusive evidence in favour of the paranormal. There are no doubt several thousands of such cases in the files of parapsychologists around the world and it is difficult to explain them away either as fraud or as chance coincidences. I am sure several of you also have similar experiences at one time or another. I hope those of you who have them would write them to me in as much a detail as possible. The reason for not relying on these cases for their evidential value lies in certain inherent difficulties of assessing

their veridicality, as well as the lack of proper methods to evaluate the probability of their being chance coincidences. Fortunately, it is no longer necessary for us to depend on these cases for the evidence of the paranormal. The ingenuity of experimental scientists in parapsychology has brought the paranormal into the laboratory where reasonable controls can be exercised. And to this experimental work we shall turn in our next lecture.

REFERENCES

1. *Six Great Scientists*, by J. G. Crowther, (London: Hamilton, 1955), p. 9.
2. *Science and Hypothesis*, by H. Poincare, (New York: Dover Publications, 1952), p. xviii.
3. *Ramanujan*, by G. H. Hardy, (New York: Chelsea Publishing Company, 1959), p. 1.
4. *Ibid.*, p. 3.
5. *Ramanujan: The Man and Mathematician*, by S. R. Ranganathan, (Bombay: Asia Publishing House, 1967), pp. 12-13.
6. *Religion, Philosophy and Psychical Research*, by C. D. Broad, (London: Routledge & Kegan Paul, 1953), p. 10.

LECTURE II

SOME LABORATORY STUDIES OF ESP

LECTURE II

SOME LABORATORY STUDIES OF ESP

I

Our friend Sri Nagabhushana Rao's curiosity was rightly not satisfied with his experiences. He went on to conduct some experiments to further satisfy himself about the possibility of having such experiences. Here is a brief report of what he did.

After six or seven months of planchette trials, it occurred to me to conduct an experiment. We were sitting on the first floor of a friend's house. There was a wall in the ground floor. I sent a man to go down to the ground floor and set the clock at random and then leave the house. After some time, say 30 to 45 minutes, we 'invoked' a 'spirit' and wanted the 'spirit' to tell me the time at the moment on the clock on ground floor. The time on the clock dial was not anywhere near the probable correct time. The 'spirit message' gave the 'correct' time as shown on the dial! This I repeated a half-dozen times on different occasions and every time the time on the dial of the clock was reported without any error. The man who set the clock at random was, always, sent away. . .

After this, I devised another experiment. I asked an 8 or 9 year old girl who does not know English to take my book from the shelf and put a book-mark at random. I asked the 'spirit' to read the first word in say the 4th line, on the left hand page where the book-mark was kept. In this, an astounding result was

recorded more than once but there were quite a few failures. No statistical record was kept.

Our friend is not alone, nor is he the first to try an experiment like this. The occurrence of paranormal events agitated the minds of inquiring men throughout the recorded history even when these events were attributed to supernatural agencies. Indians made a science of it and believed that one could acquire paranormal abilities by the practice of concentration and yoga.

More than twenty-five hundred years ago King Croesus of Lydia attempted to test the abilities of oracles.¹ He sent his agents to selected oracles. The agents asked each of the oracles to say what the king was doing at that very moment. It was said that the oracle at Delphi described accurately what the king was doing in the kitchen at that time. Notwithstanding these very early beginnings of the attempts at the experimental verification of the paranormal, a systematic and scientific study of it had to wait the establishment in London of the Society for Psychical Research in 1882. The work of the Society stimulated many a scientific mind to undertake investigations.

The early experiments centred around the idea that there may be some relationship between the hypnotic state and the paranormal. The French physician Dr. Azam² noted that a patient of his in a hypnotic state responded to an unspoken thought, which suggested to him the occurrence of telepathy, i.e., the transference of thought between minds without any known sensory mediation. Janet³ conducted experiments in which he tried to induce hypnotic trance from long distances by telepathy. Professor and Mrs. Sidgwick⁴ satisfied themselves of the evidence for telepathy among their hypnotized subjects. William Barrett⁵ reported that his subject guessed playing cards correctly much more often than one would expect by chance. He attributed this success to telepathy.

Charles Richet was among the first to employ mathematics of probability in evaluating the evidence of parapsychology. And this marked the beginning of a new era in parapsychology. Without proper methods of evaluation, the experimental data are not different from the experiences that spontaneously occur to people, except they lack the richness and variety of spontaneous cases. It was, however, left to Dr. J. B. Rhine, a scientist trained in biological science at the University of Chicago, to carry out extensive series of experiments at Duke University for many years, properly evaluate his results, and thus help give parapsychology a firm scientific base.

Rhine's techniques were simple, easy to carry out, and not difficult to evaluate. He, along with his colleagues in the Department of Psychology, designed a set of cards which looked like playing cards from the back, but were inscribed inside with either a circle, a plus sign, three wavy lines, a square, or a five-pointed star. These cards were made into packs of 25, each pack containing five cards of each symbol. Rhine randomly shuffled the pack of cards and asked the subjects to guess the cards one by one. A subject is expected to guess correctly an average of five cards per deck. The deviation from chance expectancy in the results of a given experiment could be subjected to statistical evaluation to determine how probable it is that such a deviation could be attributed to chance.

II

In the first three years of experimentation Rhine⁶ was able to find eight major subjects whose success convincingly ruled out chance as a factor responsible for the results. But several critics raised questions about Rhine's experiments. The major criticisms were that (a) the shuffling of cards might not have been random; (b) the subjects could have obtained

sensory cues from the backs of the cards since the same deck of cards was used more than once; (c) the experimenter or the agent could have unconsciously whispered what the card being guessed at was; and (d) the experimenter could have unconsciously committed errors in recording the subject's guess so as to obtain higher scores. While it could not be established that any of these did in fact happen, the possibility that any or all of these could account for the results could not be ruled out. Being conscious of these difficulties, Rhine undertook a test which could answer the critics of his earlier work.

The Pearce-Pratt experiment, as it has come to be known, is a sort of climactic undertaking by him. In this experiment consisting of four subseries, Hubert Pearce, a student in the Divinity School at Duke University, was the subject; and J. G. Pratt was the experimenter. There were altogether seventy-four runs of twenty-five trials. Subseries A, C, and D were done with a distance of 100 yards between the subject and the cards. In Subseries B, the distance was 250 yards. The length of Subseries A, C, and D was agreed upon in advance. In the words of the experimenters, here is the procedure.

At the time agreed upon, H.E.P. visited J.G.P. in his research room on the top floor of what is now the Social Science Building on the main Duke campus. The two men synchronized their watches and set an exact time for starting the test, allowing enough time for H.E.P. to cross the quadrangle to the Duke Library where he occupied a cubicle in the stacks at the back of the building. From his window, J.G.P. could see H.E.P. enter the library.

J.G.P. then selected a pack of ESP cards from several packs always available in the room. He gave this pack of

cards a number of dovetail shuffles and a final cut, keeping them facedown throughout. He then placed the pack on the right-hand side of the table at which he was sitting. In the center of the table was a closed book on which it had been agreed with H.E.P. that the card for each trial would be placed. At the minute set for starting the test, J.G.P. lifted the top card from the inverted deck, placed it facedown on the book, and allowed it to remain there for approximately a full minute. At the beginning of the next minute, this card was picked up with the left hand and laid, still facedown, on the left-hand side of the table, while with the right hand, J.G.P. picked up the next card and put it on the book. At the end of the second minute, this card was placed on top of the one on the left and the next one was put on the book. In this way, at the rate of one card per minute, the entire pack of twenty-five cards went through the process of being isolated, one card at a time, on the book in the center of the table, where it was the target or stimulus object for that ESP trial.

In his cubicle in the library, H.E.P. attempted to identify the target cards, minute by minute, and recorded his responses in pencil. At the end of the run, there was on most test days a rest period of five minutes before a second run followed in exactly the same way. H.E.P. made a duplicate of his call record, signed one copy, and sealed it in an envelope for J.B.R. Over in his room, J.G.P. recorded the card order for the two decks used in the test as soon as the second run was finished. This record, too, was in duplicate, one copy of which was signed and sealed in an envelope for J.B.R. The two sealed records were delivered personally to J.B.R., most of the time before J.G.P. and

H.E.P. compared their records and scored the number of successes. On the few occasions when J.G.P. and H.E.P. met and compared their unsealed duplicates before both of them had delivered their sealed records to J.B.R., the data could not have been changed without collusion, as J.G.P. kept the results from the unsealed records and any discrepancy between them and J.B.R.'s results would have been noticed. In Subseries D, J.B.R. was on hand to receive the duplicates as the two other men met immediately after each session for the checkup.⁷

The results of the experiment are highly significant. Under these experimental conditions, Pearce was able to guess many more cards correctly than one would expect by chance. The probability that such a result could be attributed to chance is smaller than 10^{-22} .

Now, there are generally three kinds of criticisms that disbelievers in ESP offer against experimental results in parapsychology. Some find fault with the statistical procedures employed; some do not consider the experimental conditions adequate to exclude alternative hypotheses; and a few accuse the subject, the experimenter, or both, of indulging in fraud. Each of these objections may be considered individually to see whether or not they refute the results of the Pearce-Pratt series.

At the outset, it may be pointed out that the statistical methods employed in psi research are not the innovations of parapsychologists, but are procedures already used in other 'respectable' sciences. Therefore, there is no justification in criticizing the statistical methods *per se*. The question whether these methods are erroneously used, or that their assumptions are not satisfied or are violated, can, however, be examined. Notwithstanding the testimony of the American Institute of Mathematical Statistics,⁸ as early as 1937, that

the mathematical evaluation of ESP data was as genuine and trustworthy as any statistical application in other sciences, it may be in order for us now to consider some of the objections of a statistical nature and how they relate to the Pearce-Pratt series.

The first of the criticisms in this category is that any experiment taken alone does not provide conclusive evidence. There may be large chunks of unpublished and insignificant data which, when considered together with the successful experiments, would render the results of the latter insignificant. The Cambridge psychologist, Dr. R. H. Thouless, has clearly shown the absurdity of the argument that the experiments selected to be the best do not prove the existence of the paranormal when taken alone. Reflecting on this problem and referring to Soal-Goldney experiments he concludes:

... We find that we should have to assume a number of unsuccessful ESP experiments much larger than the whole history of the world has given time for. The odds against a total result as good as that of Soal-Goldney experiment occurring in a chance series has already been given as about a hundred million billion billion to one. Even if this were the only successful ESP experiment that had ever been done, we can calculate that it would remain beyond reasonable expectation of chance occurrence if it were the selected best of a million billion experiments (P would then be 10^{-12}). But a million billion experiments is a larger number than could have been carried out if every inhabitant of the globe had done a parapsychological experiment every month for the last sixty million years. Even if it were possible that so many experiments could have been done, the odds against one turning up by chance as good as the Soal-Goldney series would be more than a billion to one; odds of this order are

as near to impossibility as one can get empirically. So the case against a chance explanation would be overwhelming if this experiment stood alone; in fact, it is far from standing alone and the case against the 'selected best' explanation is correspondingly stronger.'

The second argument is that the order of the target cards used in the experiments may not be random. After one run, the subject in an experiment could possibly infer what the target order in the next run would be unless the next sequence were random. Were the target sequences in the Pearce-Pratt series random? The experimenter, we are told, selected a pack from several available in the room. 'He gave this pack of cards a number of dovetail shuffles and a final cut, keeping them facedown throughout'. Such procedure is usually sufficient to ensure the randomness of the targets. Even assuming that the target order was not completely random it is difficult to conceive how nonrandomness of the targets could produce such a large deviation as in the Pearce-Pratt series, unless it is further assumed that the subject was using the knowledge of the order of the cards in one run as a basis of inference for the order of the cards in a subsequent run. The procedure of the Pearce-Pratt series clearly excludes this possibility, for the subject in no one session knew the order of the target cards for any run until the end of the session.

Finally, there is the question of optional stopping. It is argued that an experimenter may stop his experiment at an advantageous point when the results reach a desired level of statistical significance. If he were to continue his experiment further, so goes the argument, the results might be reduced to the level of chance. While this argument may have some force against experiments reporting barely significant results, which do not set the length of the experiment in advance, it is hardly justifiable in the Pearce-Pratt experiment since it is

almost impossible that results of this magnitude could have occurred just by chance at any point in the course of the experiment. Moreover, in three out of the four subseries, the termination point was set in advance.

Since none of the objections against the statistical treatment of the ESP data seems to hold in the case of the Pearce-Pratt series, it may be concluded that the evidence cannot be explained away as a statistical artifact. The logic of statistical inference leads us to assume a nonchance factor that is responsible for the phenomenally large deviation.

Now, let us turn to the second kind of criticism: were the experimental conditions in the Pearce-Pratt series such as to exclude alternate hypotheses to ESP such as sensory cues? If the subject had had any sensory cues that enabled him to obtain information about the cards, he would of course have been able to guess more cards correctly than would be expected by chance. What are the possible cues? The subject might have obtained certain clues from the backs of the cards: but in this experiment the subject never saw the backs of the cards presented as targets. The experimenter might have whispered unconsciously what a particular card was; but the experimenter himself in this experiment did not know the order of the cards. Moreover, the experimenter and the subject were separated by at least 100 yards, and there was no possibility of communication between them during the test period. In fact, the distance factor in the experiment rules out the possibility of any sensory cues.

Could there have been any errors in recording which would account for the deviation? At one time, much was made by the critics about the possibility of 'motivated' errors. It was argued that if an investigator who is looking for evidence of one kind makes errors, he is more likely to err in a direction which will help him to find the evidence he is looking for than in the opposite direction. For example,

'inversion' errors are a kind of motivated errors. If the person recording the results knows that the targets are a 'star' and next a 'circle', and the subject calls a 'circle' first and 'star' next, the recording person may write in 'star' and then 'circle', thus giving the subject two hits when in fact he had none.

It is obviously conjectural to suppose such errors occur without the experimenter's noticing them. Most of the people who do carry out experiments know that this possibility is very small. In the Pearce-Pratt series, even this possibility was completely eliminated. The subject and the experimenter kept independent records of calls (subjects' guess) and cards (targets) respectively, made duplicate copies of the records and handed them over to a third person, who then compared the two. Since the subject did not have any information about targets and the experimenter had no knowledge of the calls when he made the record of the targets, the possibility of recording errors causing the deviation is eliminated. Gardner Murphy, B. F. Riess, and Ernest Taves examined the photostatic copies of the original records and found only one error in all the work; that was the omission of a hit. Surely it could not have been motivated!

While these extraordinarily improbable results rule out coincidence as a reasonable explanation, the design of the experiment controls against possible sensory cues and recording errors. What then is the explanation? Either the results demonstrate the existence of the paranormal, or one or more persons involved in the experiment were engaged in conscious and deliberate fraud. This brings us to the third criticism.

Could the subject have cheated? At least one critic answered in the affirmative.¹⁰ It was pointed out that the subject could have left the library after he was seen entering it and could have gotten sight of the cards as they were turned up for recording. However, for the subject to have done

this, it must be assumed that he or an accomplice drilled a small hole in a trapdoor located in the ceiling and latter filled the hole in—all this without being noticed. Rhine and Pratt have shown the implausibility of this argument in the following discussion of Series D:

In this series, J.B.R., who had remained in the background previously, came into the test room with J.G.P. and sat through a series of six runs through the test pack (150 trials) for the purpose of scrutinizing the entire procedure from the point of vantage, to ensure that it was faithfully executed. He, like J.G.P., could see the subject from the window as the latter entered the library (and, of course, could see him exit as well). He was in the experimental room at the end of each session to receive the independent records from both J.G.P. and H.E.P. immediately on the arrival of the latter at the close of the session. Thus the subject was obviously allowed no opportunity to enter the room alone and copy the order of the cards or the impressions left on the record pad. Even with the somewhat imaginative supposition that H.E.P. had a collaborator, there was no time for the latter, even if he had (unnoticed by J.B.R.) observed the card-turning and recording by J.G.P., to have communicated the knowledge of card order thus gained to H.E.P. as he arrived in the building for the checkup. H.E.P. had to have his duplicate record in his own handwriting, with one copy sealed in an envelope, ready to hand to J.B.R. on entering the room. J.G.P. had to do the recording of the last run of each session after the test was over and H.E.P. was already on his way to the test room. Yet these final runs of the session were, in themselves, independently significant statistically.¹¹

The next logical question is whether the experimenters

could have conspired to produce fraudulent results. Thouless¹² pointed out that this is improbable but not impossible. As he says, there can be no possible control against fraud even though it can be made more and more improbable by dividing responsibility among experimenters and by introducing observers and witnesses.

The fraud hypothesis assumes that if a result can be obtained by normal (though improbable) means, such as fraud, that result cannot provide evidence for a new phenomenon like ESP. To push this argument to its logical conclusion leads us to the absurd situation of holding that there can be no new phenomenon which is not anticipated by previous knowledge since the possibility of fraud is impossible to eliminate. To refuse to look at any well-documented evidence on *a priori* grounds of its impossibility assumes that the knowledge of the world which makes up the scientific consensus of a certain period of time is unalterably true. But what evidence do we have that such is the case? Logically, just as one cannot prove the existence of something from a premise that assumes its existence, neither can the existence of a phenomenon be defined on the premise that it does not exist.

The central fallacy in the arguments of Hansel and like critics in ESP research seems to be this. They are on the one hand willing to accept the possibility of ESP phenomena on the basis of statistical evidence which is always of the nature of how improbable or probable the occurrence of an event is. Statistical evidence is essentially a confidence rating and never guarantees absolute certainty. On the other hand, they do not seem to concede such a relativistic evaluation with regard to the possibility of fraud.

While it is true that no statistical computations on the probability or the improbability of the occurrence of fraud in a given experiment are made, it is not difficult to have an

insight into such a probability. In an experiment like the Pearce-Pratt, it is hardly plausible to argue that fraud had taken place. There is no evidence for fraud. Also the *a priori* probability of fraud occurring in such a situation does seem to be much smaller than any acceptable criterion of statistical significance. How probable is it that a divinity student participating in an experiment would engage in deliberate fraud? How probable is it that he does this without being caught in several months of testing by seasoned experimenters like Pratt and Rhine? How probable is it that a graduate student, who is well adjusted and not known to have any psychopathic tendencies, would drill a hole on the ceiling to get a look at the target cards? How probable is it that he does all this without being noticed. If all that Hansel needs is a quantification of the improbabilities involved, this is a task that does not seem to be formidable. But, then, would Hansel accept ESP evidence if the probability of fraud occurring is smaller than the acceptable criterion of statistical significance? The possibility of fraud cannot be absolutely controlled. It can be made less probable. In the Pearce-Pratt experiment the possibility of human fraud is not only not apparent but seems to be quite improbable.

Fortunately, we need no longer depend on the integrity of any one or two experimenters. Since the Pearce-Pratt experiment there have been a number of other well-controlled experiments which gave extraordinarily significant evidence for the paranormal, such as the Pratt-Woodruff¹³ experiments conducted in 1939 at the Parapsychology Laboratory of Duke University, the Soal-Goldney¹⁴ experiments carried out in England, and the Ryzl-Pratt¹⁵ experiments with Pavel Stepanek in Czechoslovakia. The last mentioned of these involved the participation of not less than eight different experimenters at different times, rendering the fraud hypothesis extremely unconvincing.

I must not fail to mention, however, that not everybody and certainly not all psychologists find the evidence as convincing as it is to me or as it would have been to them if it were in another field. What we must recognize is that the 'will to disbelieve' is as strong as the 'will to believe'. But facts are independent of our beliefs and predilections. The main difficulty with ESP is that it is elusive and difficult to capture. If we produce ESP on demand, as we would a ten rupee note, then no one could question its existence and still be considered sane. Therefore, parapsychologists today are attempting to understand the nature of this ability so that they can deal with it more assuredly. For the same reason they are looking at our cultures, which believed in the possibility of the paranormal, to provide them with techniques of developing it. While parapsychologists are still far from knowing the nature of the paranormal, during a short span of time and with limited men and resources, they have achieved significant success. They are able to provide a good deal of evidence for the existence of such paranormal abilities as telepathy (extrasensory thought transference), clairvoyance (nonsensory awareness of external objects and events), and precognition (noninferential foreknowledge). There is also evidence for the ability of mind to influence matter directly. This ability is called psychokinesis or PK. Telepathy, clairvoyance and precognition are together called extrasensory perception or ESP.

I shall briefly summarize the findings of parapsychologists, who in their attempt to understand and control the paranormal, which they call psi to avoid extraneous connotations, have raised several questions like the following. Is the paranormal ability an individual gift or one that is likely to be found in all humans? What kinds of people are most likely to be successful ESP subjects? Do health, age, and sex of subjects have any effect on their ESP success? Are there any

physiological or psychological states that are related to parapsychological phenomena? Can we develop ESP by practice and training? How is ESP related to the nature of the subject, to the surroundings and the content of experience, such as targets in an experiment?

III

Is Psi Generic?

Do all human beings have the ESP ability or is it a special gift of a few? While it is true that several of our outstanding experiments, such as Pearce-Pratt, Soal-Goldney, and Ryzl-Pratt experiments, were conducted with a single and apparently gifted subject, it cannot be reasonably argued that ESP is a special gift. Some of the outstanding experiments, such as the Pratt-Woodruff experiments, were carried out with unselected subjects. In fact the bulk of subjects in the experimental studies of ESP are unselected. In several of these studies involving a number of unselected subjects, the results gave evidence for ESP, even though the results of none of the subjects taken by themselves were significant.

It does not, however, mean that every subject tested in a laboratory would show ESP. If it was the case, the job of the parapsychologists would have been much simpler. As Murphy says,

The evidence has finally driven us directly into the view that we are concerned with generic, and not simply with individual gifts. Much depends on the subtlety of the method, and the devices that we use for reinforcing and bringing to maximal expression whatever primitive and half-choked functions may be waiting for our detection and cultivation.¹⁶

ESP and Physical Condition

It is sometimes reported that a person who met with an accident and injured his head showed parapsychological

abilities after the accident. Is it true, therefore, that certain kinds of brain damage, ill-health, such as insanity, are related in some way to ESP? By and large the results do not support this view, even though an experiment by Schmeidler¹⁷ with patients suffering from cerebral concussions gave evidence of ESP. She found that subjects suffering from cerebral concussions scored significantly better in an ESP test than would be expected by chance, while the control group, which included among others those who recovered from cerebral concussions and discharged on the day of the ESP test, did not show any ESP. However, Schmeidler herself preferred a psychological interpretation of her findings and attributed the high scores of the patients to 'their less active orientation toward their physical environment and their willingness to accept passively the impressions (including ESP impressions) that came to them'.¹⁸ In our own studies at Andhra University, we found that neuroticism scores of junior college students are related to their ESP scores. People with high neuroticism scores, who are less likely to be well-adjusted, obtained far fewer ESP scores when compared to the subjects who have low neuroticism scores.

Sex Differences

It is often believed that women are more intuitive than men. In fact L. E. Rhine reports that in her vast collection of paranormal experiences women outnumber men ten to one. But she readily concedes the possibility that this 'difference might be the result of such superficial causes as women being more communicative, less inhibited on this topic than men'.¹⁹ Sex differences in ESP scores were also reported by several experimenters. But in some experiments females scored more than males and in some others, males scored better than females. It seems likely, therefore that both men and women have ESP, but the circumstances in which ESP is manifested might be different for them.

Special States of Mind

Are there any special states of mind that help produce ESP? Among those that are investigated are relaxed and hypnotic states. The novelist Upton Sinclair²⁰, who discovered extraordinary telepathic abilities in his wife, found that a relaxed state of mind was essential for success in the experiment. I myself found that my subject SH obtained a significantly better score following a relaxed state of mind created with the help of hypnotic suggestion, than in the prerelaxed period.²¹

A number of experimental studies were made to find out whether hypnotic states facilitate manifestation of ESP. The results were interesting, but inconclusive. The most promising of them is that of Ryzl²² with his subject, Pavel Stepanek, in Czechoslovakia. The subject, who did not show any ESP ability in the beginning, became one of the most outstanding subjects in the field after undergoing hypnotic training under Ryzl. In order to establish a definite relationship between hypnotic training and ESP, however, Ryzl would have to train more such subjects, a possibility which still remains to be actualized. We will have more to say on this in the next lecture.

The Indian tradition believes in the possibility of obtaining supernormal powers, such as ESP, by yogic training. We have undertaken some studies to explore this possibility, but we are far from the point when we can claim to throw any light on this problem. One of the most challenging things today in parapsychology is whether we can train people to acquire this ability. And in this context the study of yoga is bound to figure prominently in the future.

Several of the paranormal experiences occur in dreams. Is it possible that the dream state is more favourable for ESP than the waking state? Significant research during the last five years has been carried out at Maimonides Medical

Center in Brooklyn, New York, by two competent psychologists, Dr. Montague Ullman and Dr. Stanley Krippner.²³ In a series of experiments they were able to establish significant and meaningful correlations between their subjects' dream reports and the target pictures looked at by an agent in a different room at the time the subject was dreaming. The subjects' dreams were monitored by means of an electroencephalograph and rapid eye movement technique.

Personality Characteristics

Considerable research was done to study the relationship between the personality characteristics of the subject and their ESP scores. Projective tests, questionnaire inventories, attitude scales, and a variety of other devices of measuring personality were employed. Among the personality dispositions and personality traits explored are extroversion-introversion,²⁴ expansiveness-compressiveness,^{25,26} extrapunitiveness-impunitiveness,²⁷ neuroticism,²⁸ anxiety,²⁹ defense mechanism,³⁰ spontaneity,³¹ etc.

In a recent article, the British psychologist Eysenck³² surveyed a large number of studies which point out a definite relationship between extroversion and introversion on the one hand and ESP on the other. The conclusion is that extroverted subjects, i.e., the outgoing, sociable, affable sort of people, tend to obtain better ESP scores than introverted, i.e., shy, reserved, withdrawn type of people. While a number of studies suggested that the spontaneous, the impulsive, the task-oriented, the expansive, the not-withdrawn and the less neurotic tend to obtain better ESP scores than their counterparts, I do not personally believe that personality differences are directly related to ESP scoring. In my opinion the introverted subjects would score just as well as the extroverted subjects if our tests are properly adapted to the former. The tests we use today in our research generally favour an

outgoing, sociable person rather than a contemplative, introverted person. In a test situation which involves people, the extrovert is more likely to find himself at home than the introvert and this may explain why the extroverts did better.

An important study by Dr. Schmeidler that has been replicated several times in different continents, including Asia and South America, established a definite relationship between subjects belief in the possibility of ESP and his ESP scores. The subjects who believed in the possibility of ESP tended to score more hits than expected by chance, while those who disbelieved in such a possibility obtained fewer hits than expected by chance.

Target Materials and Experimental Conditions

Are there any special circumstances or events to which ESP is specially sensitive? A great many reported paranormal experiences involve highly emotional content, like knowing a disaster well in advance of its happening, or dreaming about a distressing accident that actually happened elsewhere at that time. But these reports may not be taken at their face value, because we generally tend to observe and report such experiences that are more striking and meaningful than others.

The experimental studies in this area, though not entirely conclusive, strongly favour a psychological interpretation of the role of targets. In several of the studies the size, shape, color, and form of the targets the subjects were guessing did not seem to matter very much. When they did make a difference in the subject's scoring it was attributed to their psychological effect on the subject. These effects are many and varied. In the Pratt-Woodruff experiments novelty played a very significant role. In our language ESP experiments³³ where the targets were words in languages not known to the subjects, such as Telugu for American students, the challenge posed by the experimenter to cross the language

barrier seemed to be a significant motivating force. In the experiments of Stuart,³⁴ Rice and Townsend,³⁵ the rapport between the agent, who is sending the telepathic message, and the subject, who is guessing it, was found to be important. Several studies, including those of Fisk and West,³⁶ Freeman,³⁷ Rao,³⁸ and Skibinsky,³⁹ suggested that the emotional significance of the targets to the subjects are meaningfully related to their ESP scoring.

Let me illustrate this point with reference to the experiment of Fisk and West. Fisk and West found that a subject showed special preference for crosses and circles and that cross and circle symbolized for him male and female genital organs. Fisk and West devised a special test in which the same subject was asked to guess the cards in a special deck prepared for him. In this deck of ESP cards, cross and circle symbols were covered by male and female symbols respectively. Fisk and West found that their subject was highly successful in guessing correctly the cards with erotic symbols only. On other cards his scores were at chance level. These results clearly suggest that the use of target symbols carrying strong emotional associations may promote success with at least some subjects. Fisk and West pointed out: 'The success of the "erotic" targets in this experiment may be due less to their eroticism than to their significance in the context of the subject's psychological conflicts'.⁴⁰

Dr. Thelma Moss⁴¹ used multisensory target materials and reported extremely interesting results. Following her, many parapsychologists today are considering the use of multisensory stimuli in their ESP research to obtain enhanced psi effects.

Is Psi Voluntary?

Is paranormality a voluntary ability or an involuntary phenomenon? I think there is sufficient evidence to show

that paranormality is voluntary. It is, of course, absurd to expect significant results in ESP experiments unless we assume at the outset that the subjects can use their ESP ability when they are instructed to do so. There is no sufficient evidence in the literature, however, to show that the subjects can recognize their successful guesses from their unsuccessful ones. This leads us to one of the very basic characteristics of the paranormal. As J. B. Rhine says, 'The most significant and revealing characteristic of psi is that its operation is entirely unconscious. So far as is known, the subject is never conscious of the occurrence of psi.'⁴²

Psi-missing

The unconscious operation of the paranormal seems to be at the root of what is called psi-missing. Some subjects, it is found, make significantly fewer correct guesses than one would expect on chance hypothesis. In other words, some subjects fail so badly in their attempts to guess the cards, the failure itself cannot be due to chance or lack of ESP ability. We have parallel examples in life situations also. For instance, some persons are known for their bad luck and for making wrong choices all the time. If the intuitively taken decisions go wrong more often than is usual, we must assume psi-missing and that the individual is in fact intuitively choosing the wrong one.

My own work has been largely in this area of psi-missing. I noticed in a large number of studies in which contrasting conditions, such as two different sets of targets were present, that the subjects tend to score positively under one condition and negatively on the other. I felt that if we could only predict under what circumstances such a differential response occurs and what direction it takes, we would be in a better position to control ESP.

I had hoped to predict the direction of the subject's scoring by employing targets having favourable emotional connotations. Indeed, I succeeded in my first attempt,⁴³ in which the targets specially prepared by the subjects (choice cards) were used in conjunction with ESP cards. As predicted, the subjects scored positively on choice cards and negatively on ESP cards. At that time, I termed this effect the 'preferential' effect. I assumed that it is a result of a consciously or unconsciously exercised preference on the part of the subject to a particular set of cards. This, of course, may or may not be the case, as subsequent experiments have shown. Such an assumption is necessary, however, for it leads the investigator to ask what the hidden motives are that give direction to the differential response. For the present, then, we use the terms 'preferential effect' and 'differential response' interchangeably. We assume that this effect is governed by certain laws, without failing to recognize that the laws are yet to be discovered.

In an attempt to repeat the experiment with choice cards, I⁴⁴ found that the subjects obtained significantly more hits when the targets were ESP symbols than when the target symbols were selected and drawn by the subjects themselves. This reversal, however, could be attributed to certain changes in the experimental setup. In the first experiment, the subjects knew whether they were guessing choice cards or ESP cards, whereas in the latter experiment, it was not the case.

This explanation, however, does not seem entirely satisfactory. In another of my studies,⁴⁵ I observed reversals in the scoring pattern occurring in the course of the same testing session. In each session, the subjects did two runs with a deck consisting of twenty-five standard ESP cards and twenty-five choice cards mixed randomly. During the first run, the subjects did obtain more hits on the cards of their own choice; but in the second run, their 'preference' reversed

and they obtained more hits on ESP cards than on choice cards. There was a statistically significant difference, on the one hand, between the combined hits on the choice cards in the first run and ESP cards in the second run, and on the other hand, between the total hits on the ESP cards in the first run and the choice cards in the second run.

From these studies using the choice cards, it had become clear that there were other variables besides the choice of the agreeable targets. This did not make it simple to predict the direction of scoring in this differential situation. The attitudes of the subjects—whether they were sheep or goats—and their personalities may have played a role in the selection of the targets as well as their performance with them. Consequently it became necessary to use other target materials which would have a uniform impact on the testing population. For this reason, I have made use of words in a language unfamiliar to the subject along with words in a familiar language as target material. Here again there was no complete uniformity in the subjects' preference. In some of the experiments yielding significant results, I came across a somewhat odd phenomenon. My male (American) subjects tended with a good degree of consistency to obtain positive scores on the targets in the unfamiliar Telugu language and negative scores with English targets. The female subjects, with a lesser degree of consistency, scored in the opposite direction.⁴⁶

Recently we have extended our studies from target variables to situational variables. Our subjects were applicants for employment or admission at Andhra University. These subjects were called for interviews which presumably determined their selection, and they were given ESP tests before and after the interview. We found consistently in three separate series of experiments that subjects tend to score below chance before the scheduled interview and above chance after

the interview. All these studies indicate that the differential response would seem to manifest in lawful and predictable ways.

IV

If we consider psi on the model of information theory, we could assume that psi signals are received at the unconscious level, where they are subject to distortion and symbolization. The forces of the unconscious and the individual peculiarities of the subjects act as noise. Again, the limitations of the subject have their respective influence on the decoding of information.

The signal to noise ratio is unfortunately low in ESP communication. We must therefore study how we can strengthen the signal and reduce or filter out noise. In recent years considerable effort has been given to the study of the conditions under and the ways in which psi-missing occurs. While a number of explanations were given and hypotheses advanced, it seems to me that the reason for psi-missing is in the nature of the human mind and the way it works. The mind by nature is a fluctuating thing, shifting its attention constantly. It is because of this shifting, of course, a lot of our intellectual activity, which consists in perceiving relations between things, is made possible. Even though the subject focuses his conscious attention on a specific target, his psi fluctuates so haphazardly that he barely guesses in our experiments a few more correctly than chance. The constant fluctuation of the mind results in receiving information signals from so many sources that a kind of jamming takes place and we are often left with no usable information. It would seem, therefore, that psi-missing and the elusiveness of the paranormal may be traced, on the one hand, to the noise generated in the unconscious and to the jamming of the signals due to the fluctuating character of the psyche on the

other. There is evidence in the literature that confusion of targets does take place when the subject makes his guesses. Consider, for example, the phenomenon of displacement. Whately Carington⁴⁷ discovered in his experiments with drawings that some of his subjects tended to guess correctly not the picture which he set for himself as the target, but the one to follow. In fact, on the suggestion of Carington, Soal⁴⁸ re-examined his data for displacement and discovered his two outstanding subjects with whom he worked with great success afterwards.

The fact that the subject could guess correctly not the card he was supposed to call, but a different one suggests that signals from present targets as well as past and future, from the targets aimed at and those not aimed at, are received and the subject is left with the problem of picking the right signal from the many he receives. There is then the need first to control the input of these signals, and second, to reduce the noise and learn to interpret the signals in proper and appropriate ways.

How can this be done? Are there any special techniques that may be expected to perform this task and render a subject's performance more dependable? We shall examine some of these in the next lecture.

REFERENCES

1. Some philosophical questions about telepathy and clairvoyance, by H. H. Price, (*Philosophy*, 1940, 15: 363-385).
2. *The Reach of the Mind*, by J. B. Rhine, (New York: Sloane, 1947).
3. *Apparitions and Thought-Transference*, by F. Podmore, (London: Scott, 1894).
4. *Phantasms of the Living*, by Mildred Sidgwick, (New York: University Books, 1962).
5. On some phenomena associated with abnormal conditions of

- mind, by W. Barrett, (*Proc. Soc. Psych. Res.*, 1: 238-244, 1882-83).
6. *Extra-Sensory Perception*, by J. B. Rhine, (Boston: Humphries, 1935).
 7. A review of the Pearce-Pratt distance series of ESP tests, by J. B. Rhine and J. G. Pratt, (*J. Parapsychol.*, 18: 165-177, 1954).
 8. *The Reach of the Mind*, by J. B. Rhine, (New York: Sloane, 1947).
 9. *Experimental Psychical Research*, by R. H. Thouless, (Baltimore: Penguin, 1963), p. 102.
 10. A critical analysis of the Pearce-Pratt Experiment: A controversy over charges of fraud in ESP, by C. E. M. Hansel, (*J. Parapsychol.*, 25: 86-91, 1961).
 11. A reply to the Hansel Critique of the Pearce-Pratt Series, by J. B. Rhine and J. G. Pratt, (*J. Parapsychol.*, 25: 92-98, 1961), pp. 93-94.
 12. *Experimental Psychical Research*, by R. H. Thouless, (Baltimore: Penguin, 1963).
 13. Size of stimulus symbols in extrasensory perception, by J. G. Pratt and J. L. Woodruff, (*J. Parapsychol.*, 3: 121-158, 1939).
 14. Experiments in precognitive telepathy, by S. G. Soal and K. M. Goldney, (*Proc. Soc. Psych. Res.*, 47: 21-150, 1943).
 15. Confirmation of ESP performance in a hypnotically prepared subject, by M. Ryzl and J. G. Pratt, (*J. Parapsychol.*, 26: 237-242, 1962).
 16. Psychical Research and Personality, by G. Murphy (*J. Amer. Soc. Psych. Res.*, 44: 3-20, 1950), p. 5.
 17. Rorschachs and ESP scores of patients suffering from cerebral concussions, by Gertrude R. Schmeidler, (*J. Parapsychol.*, 16: 80-89, 1952).
 18. *ESP and Personality Patterns*, by Gertrude R. Schmeidler and R. A. McConnell, (New Haven: Yale University Press, 1958), p. 84.
 19. *Hidden Channels of the Mind*, by Louisa E. Rhine, (New York: Sloane, 1961), p. 132.
 20. *Mental Radio*, by U. Sinclair, (Springfield: Thomas, 1962).

21. The differential response in three new situations, by K. Ramakrishna Rao, (*J. Parapsychol.*, 28: 81-92, 1964).
22. Identification of concealed randomized objects through acquired response habits of stimulus and word association, by Pratt, Stevenson, Roll, Blom, Keil, Meinsma and Jacobson, (*Nature*, 220: 89-91, 1968).
23. Experimentally-Induced telepathic dreams: two studies using EEG-REM monitoring techniques, by M. Ullman, S. Krippner, and S. Feldstein, (*Inter. J. Neuropsychiatry*, 2: 420-437, 1966).
24. Introversion-extraversion ratings in relation to scores in ESP testing, by Betty M. Humphrey, (*J. Parapsychol.*, 18: 252-262, 1951).
25. Success in ESP as related to form of response drawings: I. Clairvoyance experiments, by Betty M. Humphrey, (*J. Parapsychol.*, 10: 78-106, 1946).
26. Success in ESP as related to form of response drawings: II. GESP experiments, by Betty M. Humphrey, (*J. Parapsychol.*, 10: 181-196, 1946).
27. Picture frustration ratings and ESP scores for subjects who showed moderate annoyance at the ESP task, by Gertrude R. Schmeidler, (*J. Parapsychol.*, 18: 137-152, 1954).
28. *The ESP subject: An Inquiry into the Personality Patterns of Psi-Hitters and Missers*, by B. K. Kanthamani. (Unpublished doctoral dissertation, Andhra University, 1968).
29. ESP and the manifest anxiety scale, by K. Ramakrishna Rao, (*J. Parapsychol.*, 29: 12-18, 1965).
30. The defense mechanism test as a predictor of ESP scoring direction by Martin Johnson and B. K. Kanthamani, (*J. Parapsychol.*, 31: 99-110, 1967).
31. Spontaneity as a factor in ESP by W. B. Scherer, (*J. Parapsychol.*, 12: 126-147, 1948).
32. Personality and extra-sensory perception, by H. J. Eysenck, (*J. Soc. Psych. Res.*, 44: 55-71, 1967).
33. Studies in the preferential effect: II. A language ESP test involving precognition and intervention, by K. Ramakrishna Rao, (*J. Parapsychol.*, 27: 147-160, 1963).

34. GESP experiments with the free response method, by C. E. Stuart, (*J. Parapsychol.*, 10: 21-35, 1946).
35. Agent-percipient relationship and GESP performance, G. E. Rice and Joyce Townsend, (*J. Parapsychol.*, 26: 211-217, 1962).
36. ESP tests with erotic symbols, by G. W. Fisk and D. J. West, (*J. Soc. Psych. Res.*, 38: 1-7, 1955-56).
37. An ESP test involving emotionally-toned objects, by J. A. Freeman, (*J. Parapsychol.*, 25: 260-265, 1961).
38. The preferential effect in ESP, by K. Ramakrishna Rao, (*J. Parapsychol.*, 26: 252-259, 1962).
39. A comparison of names and symbols in a distance ESP test, by M. Skibinsky, (*J. Parapsychol.*, 14: 140-156, 1950).
40. ESP tests with erotic symbols, by G. W. Fisk and D. J. West, (*J. Soc. Psych. Res.*, 38: 4, 1955-56).
41. Telepathy in the waking state: An experimental design, by Thelma Moss in *Psi Favourable States of Consciousness*, (New York, Parapsychology Foundation, 1970).
42. *New World of the Mind*, by J. B. Rhine, (New York: Sloane, 1953), p. 108.
43. The preferential effect in ESP, by K. Ramakrishna Rao, (*J. Parapsychol.*, 26: 252-259, 1962).
44. Studies in the preferential effect: I. Target preference with types of targets unknown, by K. Ramakrishna Rao, (*J. Parapsychol.*, 27: 23-32, 1963).
45. Studies in the preferential effect: III. The reversal effect in psi preference, by K. Ramakrishna Rao, (*J. Parapsychol.*, 27: 242-251, 1963).
46. Studies in the preferential effect: IV. The role of key cards in preferential response situations by K. Ramakrishna Rao, (*J. Parapsychol.*, 28: 28-41, 1964).
47. Experiments on paranormal cognition of drawings, by W. Carington, (*Proc. Soc. Psych. Res.*, 46: 34-344, 1940).
48. Experiments in precognitive telepathy, by S. G. Soal and K. M. Goldney, (*Proc. Soc. Psych. Res.*, 47: 21-150, 1943).

LECTURE III
HYPNOSIS, DRUGS, YOGA AND ESP

LECTURE III

HYPNOSIS, DRUGS, YOGA AND ESP

I

If paranormal awareness or ESP is an aspect of mystic consciousness, as we have assumed, it would help to know the ways one can arouse mystic consciousness in himself. There is good reason to believe that hypnosis, psychedelic drugs, meditation and yoga are all paths that lead to a higher level of consciousness which we called mystic consciousness. I shall attempt to briefly describe the states of consciousness produced in hypnotic and psychedelic experiences and also review some of the experimental studies bearing on hypnosis, drugs, and yoga on the one hand and ESP on the other.

Discussing the nature of hypnosis, Tart¹ remarks how terribly ambiguous is the word 'hypnosis'. Pointing out several sources of variability in hypnosis which include subject characteristics, demand characteristics of the situation, lack of adaptation to hypnosis and the pseudo-operational definition of hypnosis, Tart calls our attention to a core of important phenomena that can be induced by hypnosis. Among these are physical relaxation, increased suggestibility and reduction of spontaneous thought processes. There is also an enhancement of internal imagery which enables the hypnotized subject to visualize something with greater clarity than is usual. As Tart points out through hypnosis 'you are able to bring about a highly selective deployment of attention. We can alter a subject's perception of himself, his body image, his ego boundaries, and his perception of other people in the environment. . . You can also alter his perception of object, space, and time. You can induce strong desires, emotions, or needs,

and you can even alter his cognitive processes in certain ways. This has been called *trance logic*: one of its features is the acceptance of incongruities that would be cognitively unacceptable in the waking state. Other interesting features of hypnosis are increased access to unconscious and preconscious material, and altered memory function, including total and selective amnesias'.²

The psychedelic state, i.e., the state of mind produced by the use of drugs like LSD, mescaline, psilocybin and marijuana has many things in common with the hypnotic state. The enhancement of internal imagery, selectivity of attention, alteration of time and space perceptions also occur in the psychedelic state. The relation of psychedelic experience to mystic consciousness becomes obvious when we consider that one form of psychedelic experience is called 'mystical consciousness' by Pahnke and Richards.³ These psychedelic experiences seem to correspond to the nine categories derived by Pahnke from a historical survey of spontaneous mystic experiences. They are (1) unity, (2) objectivity and reality, (3) transcendence of space and time, (4) sense of sacredness, (5) deeply felt positive mood, (6) paradoxicality, (7) alleged inaffability (8) transiency (9) positive change of attitudes and/or behaviour. It is claimed that spontaneous mystical experiences of the saints and sages are 'similar to, if not identical with, psychedelic experiences of drug-facilitated mystical consciousness.'⁴

Deikman points out that the mystic phenomena seem to be a consequence 'of a partial deautomatization of the psychic structures that organise and interpret perceptual stimuli'.⁵ Assuming that contemplative meditation helps to produce mystic experience, he carried out an experiment in which he was able to obtain evidence that meditation 'produces alterations in the visual perception of sensory and formal properties of the object, and alterations in ego boundaries—all in the

direction of fluidity and breakdown of the usual subject-object differentiation. The phenomena are consistent with the hypothesis that through contemplative meditation deautomatization occurs and permits a different perceptual and cognitive experience'.⁶

It is likely then that one could attain a state of mind similar to the mystical through hypnosis, psychedelic drugs or meditation. What seem to be the common factors relevant to the attainment of the mystic state are (1) breakdown of ego boundaries (2) alteration of time, space and object perception (3) enhancement of internal imagery and (4) selective attention. I am not saying, however, that the hypnotic, the psychedelic and the meditative states are identical. There are many differences. For example, while there is reduction of spontaneous thought in hypnotic state, there is an increase of such thought in psychedelic state. What I am saying is that there is a core of common phenomena that can be induced in these states and that these seem to be similar to mystical phenomena.

Given these premises it is easy to see how relevant is the study of these states to parapsychology. One of the most urgent and unsolved problems of parapsychology is the question of obtaining reliable psi response which would involve a solution to the apparent capriciousness that seems to characterize psi in all our laboratory tests. The need for reliably scoring subjects in ESP experiments cannot be over-emphasized, since it is on finding such subjects depends ultimately the solution to many of our research problems.

Three decades of laboratory experimentation have made it only too clear that we are dealing in parapsychology with phenomena that do not seem to improve but decline with practice. Even the few subjects whom we might consider outstanding have lost their abilities, much to the disappointment of their experimenters. Dr. Tart⁷ may well be right in

hypothesizing that our card guessing experiments suggest an extinction paradigm rather than a learning paradigm. But it is the difficulty involved in isolating the successful responses, rather than any indifference on the part of parapsychologists, which is largely responsible for any failure to apply the principles of learning theory to parapsychological tests.

It is, therefore, only natural that parapsychologists looked hopefully to other methods for gaining increased control over psi. Assuming that there may be a physiological or psychological state in which psi might manifest more reliably and less capriciously, parapsychologists began experimenting with drugs and hypnosis. While quite a few studies are made concerning the latter, there are very few studies on psychedelic drugs. This is so mainly because of the restrictions on the use of these drugs even for experimental purposes. In one study by Cavanna and Servadio⁸ the effect of LSD and psilocybin on subject's ESP performance was explored. This pilot study deals mainly with the methodological problems in ESP and drug research, but the results have not been fruitful in adding significantly to our knowledge of the possible effects of LSD or psilocybin on ESP.

II

Hypnosis figures in parapsychological research on two counts. In some of the early studies, hypnosis was only an effect produced by telepathy. Gibert,⁹ for example, was reportedly successful in inducing somnambulistic trance in Madame B., a subject of Pierre Janet, by mental suggestion, i.e., telepathy. Myers¹⁰ also refers to a number of other cases such as that of Madame D. who was hypnotized from a distance by Hericourt, an assistant of Richet, and of Adams who described how a guest of his twice succeeded in hypnotizing a servant at a distance of fifty miles. Myers was himself so convinced of the genuineness of telepathetic hypnotiza-

tion, he wrote 'It has now . . . been actually proved that the hypnotic trance can be induced from a distance so great, and with precautions so complete, that telepathy or some similar supernormal influence is the only efficient cause which can be conceived.'¹¹ Platonov, Ketkov, and Vasiliev have also been known to have successfully induced hypnosis by means of telepathy. Vasiliev¹² reported, a few years before his death, his studies with hypnosis made in the 1930's. According to the reports, he was highly successful in inducing hypnotic trance in his subjects through mental suggestion from great distances.

If there is any element of paranormality in the above cases, it is difficult to discern what precisely is the role of hypnosis. It is likely, since the subjects almost invariably had been hypnotized prior to these tests, that there existed between the subject and the experimenter a kind of relationship that is commonly characterized as *rappport* which might have facilitated a type of psi induction.

Cases of apparent thought transference between hypnotizer and his hypnotized subject are not uncommon. Azam¹³ observed, for example, that one of his patients in a hypnotic state responded to an unspoken thought of his. These observations naturally led to the investigations of hypnotic states. Mrs. Sidgwick,¹⁴ using two digit numbers, experimented with hypnotized subjects, and satisfied herself that telepathy between the agent and the percipient was involved even when they were in two different rooms.

The methodological limitations of the earlier experiments using hypnosis apart, one does not know too much from these results what precisely is the role of hypnosis. To say that significant results are obtained in tests using hypnosis does not mean very much. Other tests without hypnosis also yielded similar or even better results. Any systematic evaluation of

results of hypnotic studies of psi should attempt to answer the following questions.

- (1) Does psi manifest when the subjects are in a hypnotic state?
- (2) If it does, is it any more pronounced or reliable than in the waking state?
- (3) Is the success obtained in hypnotic states attributable to increased motivation either due to explicit suggestion or otherwise?
- (4) Or does hypnosis produce any specially favourable state of mind or a level of awareness that is appropriate to heightened psi activity?

Here are some of the reports of experimental work with hypnosis published during the last thirty years or so. Using ESP cards, Grela¹⁵ tested eleven subjects in four sessions. One of them was without hypnosis and the other three were with hypnosis. In the three hypnotic sessions, positive, neutral, and negative suggestions were given one at a time. His subjects obtained a significant deviation in the sessions where positive hypnotic suggestion was given. They had their lowest scores when negative suggestion was given.

But Rhine¹⁶ reported that his subjects who were scoring well above MCE before hypnosis dropped way below in the post-hypnotic test period. This was contrary to his suggestion. He concluded: 'The important finding, and one that stands out fairly clearly, is that there *was* an effect. The hypnosis did something, even though in four out of six cases it was a reversal of the intended effect.'¹⁷

A similar result was also reported by Nash and Durkin¹⁸ who gave two of their subjects 300 trials each with single digits as targets in the waking state and an equal number of trials under hypnosis with positive suggestion. The subject obtained a positive deviation when they were working in the

waking state and a negative deviation under hypnosis. There was a statistically significant difference between the scores of the two states.

More recently, Fahler¹⁹ obtained significant positive results when his subjects were hypnotized. They scored only at the chance level during the waking state. Another experiment by Fahler and Cadoret²⁰ at Duke, gave similar results confirming the former's findings in Finland.

Casler,²¹ unlike Fahler, gave explicit suggestions for improvement in scoring. Both the preliminary and the main experiments involving a large group of subjects gave significant scores when the subjects worked under hypnotic suggestion. Casler thinks that 'the induction of hypnosis, in essence, opens up potentialities of communication which may give the individual's psi capacities the opportunity to express themselves.'²²

In another study where the subjects were given no suggestions, Casler²³ observed that scoring in the hypnotized runs was significantly higher than in the waking state. Hypothesizing that hypnosis might help accentuate ESP in both directions (positive and negative), Honorton²⁴ divided his subjects into predicted low-scorers and predicted high-scorers on the basis of a fourteen-item interest inventory. He found that the predicted low-scorers obtained negative deviation which was higher during the hypnotic condition than in the waking condition, and that there was a significant difference between the predicted high and low-scorers in the hypnotic condition alone. A subsequent study by him²⁵ confirmed these results.

I used hypnosis in some of my studies not with an intention to test whether the subjects do any better during that state, but to create through suggestion a specially favourable psychological state in which ESP may be obtained more readily. In one experiment,²⁶ my subject did two runs in each session in her normal state and followed them with two

runs in a relaxed state created with the help of hypnotic suggestion. I found that the subject scored significantly more hits in the relaxed state than in the pre-relaxed period. It is difficult to draw any confident conclusions from this study which involved only one subject and did not rule out experimenter motivation as a relevant factor.

The cumulative effect of all these results is very well summarized by Dr. Thouless. 'Some experimenters', he wrote, 'have reported better scores under hypnosis, some have obtained worse scores in that condition, and in some experiments scores have not been affected by hypnosis. In no case has anything been reported that suggests that we are within sight of the goal of producing reliably high psi scoring by the use of hypnosis.'²⁷ But the answer to our first question, viz., does psi occur in hypnotic states, is clear and affirmative. But does psi occur more pronouncedly and reliably? It does not seem so at least as far as the reliability aspect is concerned. Its bi-directionality and the concomitant unpredictability are confirmed by the results of the hypnotic studies. One could not also say whether the results obtained under hypnotic conditions are any higher than those obtained in waking states. The results of the studies by Fahler and Casler, which no doubt recorded better scoring by the subjects in hypnotic state than in their waking state, are a good deal less outstanding than the results obtained by many other investigators without using hypnosis.

Even if it is agreed that in a limited sense the results in the hypnotic condition are higher than those in the waking condition it is difficult to accept that hypnosis is directly responsible for the enhanced rate of scoring. Improved scoring could simply be a motivational effect. It does not seem possible that we could ever do a double blind experiment in which neither the subject nor the experimenter knows whether the subject during a particular session of testing is

hypnotized or not. While it should be relatively easy to keep the experimenter blind, even that has not been tried so far.

Further, there is some good reason to believe that the role of hypnosis is perhaps limited to that of raising subject's motivation. In the studies of Grela and Casler the subject scored positively when positive suggestions were given in the hypnotic state. Even Fahler who gave no such suggestion admits that 'It is quite possible that I, as the experimenter, was more successful in increasing the subject's motivation when they were hypnotized'.²⁸

It should be pointed out that none of the studies referred to so far made any attempt to discern whether there is any mental state which, apart from what is described by the blanket term hypnotic state, may be associated with psi functioning. Nor has any attempt been made to prepare the subject, apart from the suggestions to score positively or negatively, to gain control over psi functioning through hypnosis. This was left to the credit of the brave Czechoslovakian, Dr. Milan Ryzl who was the first to apply hypnosis for 'training psi faculty' with some notable success.

The work of Ryzl has now opened up potentialities that go beyond some of the most optimistic expectations one might have had some years ago. Ryzl²⁹ thinks that with the aid of hypnosis the subjects can be trained to produce psi at will under experimental conditions. Miss J. K., who had shown no psi abilities prior to her hypnotic training, gave fantastically high scores with the help of the training that she received from Ryzl. Ryzl³⁰ also trained another outstanding subject, Pavel Stepenek, who did not show any psi ability before undergoing hypnotic training. An important feature of P.S.'s work is that once he was able to obtain highly significant scores in a state of self-induced hypnosis, he continued to do so even during waking states. He was able to produce significant

results without hypnosis in the presence of visiting parapsychologists from other countries.³¹ It is interesting to note that hypnotic training proved very fruitful in the case of J.K. as well as P.S.; but for P.S. once he acquired the ability, hypnosis was no longer necessary.

Ryzl's method of training is quite simple. The training process has four stages. In the first stage, the subject is simply hypnotized with a view to increase 'his suggestibility as much as possible . . . to obtain the necessary inhibition of cerebral activity and convincing him that he is (will be?) able to acquire the ability of extrasensory perception. . .'³² The second stage consists in producing visual hallucinations. During the third stage, the subject is trained to hallucinate ESP targets and to distinguish veridical hallucinations from false ones resulting either from misinterpreting experimenter's suggestions or from a variety of other unconscious or subliminal sources. Finally, the subject is trained to do these things independently of the experimenter. I interpret the first stage as one of creating faith and self-confidence in the subject. The second is one of conditioning the subject to a peculiar stage of mind whose chief characteristic is one of receiving hallucinatory images. The third and the most important stage is two-pronged, consisting of introspective search for recognizing the veridical stages and of conditioning himself to them so that he can produce them at will. Here we find in practice the important suggestion of Dr. Tart, a learning paradigm. The secret of Ryzl's success may well be this, i.e., the creation of a receptive state in which the subject conditions himself to successful responses. When his subject P.S. apparently lost his ability, Ryzl helped him to regain it, at least temporarily, by asking him to practice at home with a set of target cards, guessing and checking so that he would know after each call whether it was a correct or an incorrect one.

Ryzl's work is thus the most hopeful of all the studies involving hypnosis. I recognize that Ryzl's case is not conclusive, and that the outstanding success of one or two subjects of the many he had doubtless tested and attempted to train may well have been due to factors other than the training itself. I also note that attempts by Dr. John Beloff³³ to repeat Ryzl's work were not successful. My hope, I believe, has two justifications, however. First, Ryzl's is the only outstanding case in recent years that suggests the possibility of training for ESP through hypnosis. And second, his method seems to have certain similarities with the technique of yoga that has traditionally been credited in the East with helping the practitioner to obtain supernormal abilities.

III

What is Yoga? What are the points of contact between yoga, hypnosis and parapsychology? Yoga is not only a method which has both psychological and physiological implications, it is also a full-fledged system of philosophy. Even though many of the apparent effects of yoga practice are easily recognizable as psychological, the object of yoga is not psychological but religious. Consequently one finds himself lost, while reading yoga literature, in the bewildering maze of phrases and concepts full of religious and philosophical connotations. But what should interest us is the fact that even the rival systems of classical philosophies in India have apparently taken the yogic claims for granted and tried to assimilate them into their systems as though yogic phenomena constitute a set of facts with which all philosophies must grapple.

I shall not attempt to present a faithful commentary on the yoga aphorisms of Patanjali here. There are enough such commentaries. I shall, however, endeavour to develop an intelligible model based on yoga teachings that could fit into

contemporary psychological dialogue and provide us with a few testable hypotheses. The result may be oversimplification and even misinterpretation of the original. But I will not be worried about that, if this model could throw some light on the important question of psi control.

The psyche (*Chitta*), according to yoga, is ordinarily in a state of continuous fluctuations. As a result of these fluctuations, we perceive, reason and obtain valid knowledge, as well as experience illusions and acquire false knowledge. Imagination, sleep, and memory are also resultant experiences of the fluctuations in the psyche. The fluctuations in the psyche are caused by the external stimuli and internal forces which include the *samskaras* and *vasanas* of this life as well as previous births. But there is power (*sakti*) stored up in the psyche, which is capable of acting on its own. In order that the psyche can act on its own, it is necessary that the fluctuations of the psyche are controlled. Yoga formulates a psychophysiological method which would help us restrict the fluctuations that obstruct the psyche from acting independently of the senses. Patanjali defines yoga as that which controls the fluctuations of the psyche.^{3.4} The yoga method has become so popular in India that the word yoga has come to be synonymous with the method itself. Not only do other schools of thought in India advocate the practice of yoga, but a few in other countries and of other faiths also believe in it.^{3.5}

Yoga prescribes an eight fold way to control the fluctuations in the psyche. The first two are *yama* and *niyama* which include certain moral commandments such as truthfulness, non-stealing, continence, cleanliness and contentment. The next two, *asana* and *pranayama*, are physical exercises that involve sitting in comfortable postures and practicing breath control. The fifth stage, *pratyahara*, is simple introspection designed to understand the workings of the psyche. The last three *dharana* (concentration), *dhyana* (meditation), and

samadhi, a standstill state of the psyche, are the most important ones in attaining the yogic state.

The first five are preparatory and the last three are the essential stages of yoga. The need for the ethical and physiological practices in the yogic training is not difficult to understand. Desires and sensory indulgence encourage further involvement in the sensory processes that result in the constant fluctuations of the psyche which are precisely those yoga seeks to control. The physical exercises are also designed, on the one hand, to control internal processes in the body from causing fluctuations in the psyche and, on the other, to reduce the sensory input from outside. While I do not take the yoga physiology of *kundalini* and *chakras* seriously, I do not find it difficult to accept that the practice of breath control, for example, could result in a greater control of the physiological processes in the body. Certain studies^{36,37} have already shown that some yogins are able to exercise a measure of control on their autonomous nervous system, could reduce heart beat, cause sweat on certain parts of the body etc.

The *pratyahara* or introspective stage is quite important. It is what appears to be the connecting link between the physiological and the psychological exercises. It is by introspection, the practitioner of yoga is able to regulate the body to suit the requirements of his mental states. My guess is that this introspection enables the yogin to isolate such of his experiences which he is seeking and to produce them later at will.

Now, the object of all these exercises is to enable one to concentrate. There are some who could achieve desired levels of concentration without these exercises. They of course could skip them. Concentration or *dharana* produces in us a state in which the natural wandering of our thoughts or the fluctuations of the psyche are brought under control. In this state of concentration, the psyche attends to one thing

so that there is intensification of activity of the mind in one direction. In a state of concentration the focus of attention is narrowed. This focus is expanded when one goes from the stage of concentration to meditation or *dhyana*. Meditation helps to concentrate longer and to fix our attention on any object for a length of time. When this is achieved, the psyche progresses to a standstill state, where the mind is steady and becomes one with the object of concentration.

If the physical exercises help the inhibition of cerebral activities, concentration, it would seem, enables us to reverse the cognitive process. When the desired levels of concentration are achieved, the psyche is no longer affected by stimuli acting on it. Concentration not only helps to inhibit stimuli exciting the psyche and causing fluctuations in it, but enables the individual to focus attention on desired objects. When this is achieved, the psyche can make a contact directly with the object, and obtain supersensuous knowledge. There are thus three important aspects to yoga. Firstly, there is the inhibition of cerebral activity, withdrawing of the senses. Secondly, the psyche is activated by concentration. And, finally, the expansion of concentration reverses the role of psyche from one of receiving impressions through senses to one of acting directly so as to take the form of objects.

It has been said that yoga involves some sort of auto-hypnosis.³⁸ It may well be. The one-pointed concentration and meditation can cause fatigue and the desired monotony to produce a hypnotic state. There are also unquestionable similarities between the two states. In both the general cerebral activity can be suppressed at will. In both the attention can be focused on the desired object to a degree that is definitely superior to the waking state. I should also think that the yogic concentration in its early phases generates hallucinatory imagery similar to that obtained under hypnosis.

Even if we conclude from these similarities that yogic concentration produces a state similar to hypnotic state, it must be admitted that yoga does more. Yoga involves also further training to which claims of paranormality could be attributed. It is in this context, I refer to the similarities between yoga and Ryzl's technique. Ryzl describes the state of mind specially favourable for the manifestation of psi in the following words. 'It is a particular state of consciousness, defying adequate description, between sleep and waking, which we most likely could characterise as a state of appeasement of mental activity and of depriving the mind of arrival of normal sensory impressions with a simultaneous intensive directing of attention in one direction.'³⁹ This is precisely what yoga claims to do by means of physical exercises and concentration.

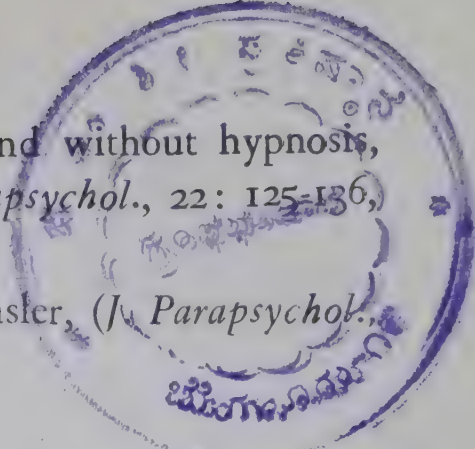
Moreover, it seems to me, the process of hallucinating by the subject is quite relevant to the training. The *modus operandi* involved in creating hallucinations and in having extrasensory perceptions may be the same, even though the source is different. The suggestion of Ryzl that the subject should be able to hallucinate in order that he may be successfully trained to get ESP impressions is, therefore, very important and deserves further explorations.

Unfortunately, not much work has been done to study ESP in relation to yoga training. Some work is being carried out at Andhra University, but it is too premature to draw any conclusions from it. The yoga technique has certain intrinsic advantages over hypnosis and psychedelic drugs. It is my hope that yoga may after all succeed, when so many others have failed, in helping us to control the paranormal.

REFERENCES

1. Hypnosis, psychedelics and psi: conceptual models, by C. T. Tart in *Proceedings of an International Conference on Hypnosis, Drugs, Dreams and Psi* (New York: Parapsychology Foundation, 1967).

2. *Ibid.*, pp. 26-27.
3. Implications of LSD and experimental mysticism, by Walter N. Pahnke and William A. Richards in *Altered States of Consciousness*, edited by C. T. Tart, (New York: John Wiley, 1969).
4. *Ibid.*, pp. 413-414.
5. Experimental meditation, by Arthur J. Deikman in *Altered States of Consciousness* edited by C. T. Tart, (New York: John Wiley and Sons Inc., 1969), p. 200.
6. *Ibid.*, p. 217.
7. Card-guessing tests: learning paradigm or extinction paradigm? by C. T. Tart, (*J. Am. Soc. Psych. Res.*, 60: 46-55, 1966).
8. *ESP Experiments with LSD 25 and Psilocybin*, A methodological approach by R. Cavanna and E. Servadio (Parapsychological Monographs, No. 5, New York: Parapsychology Foundation, 1964).
9. *Human Personality and Its Survival of Bodily Death*, by F. W. H. Myers (Vol. 1. New York: Longmans, Green & Co., 1903).
10. *Ibid.*
11. *Ibid.*, p. 207.
12. *Experiments in Mental Suggestion*, by L. L. Vasiliev, (Church Crookham: Institute for the Study of Mental Images, 1963).
13. *The Reach of the Mind*, by J. B. Rhine, (New York: Sloane, 1947).
14. Experiments in thought-transference, by Mrs. H. Sidgwick and G. A. Smith, (*Proc. Soc. Psych. Res.*, 6: 128-70, 8: 536-96).
15. Effect on ESP scoring of hypnotically induced attitudes, by J. J. Grella (*J. Parapsychol.*, 9: 194-202, 1945).
16. Hypnotic suggestion in PK tests, by J. B. Rhine, (*J. Parapsychol.*, 10: 126-140, 1946).
17. *Ibid.*, p. 138.
18. Terminal salience with multiple digit targets, by C. B. Nash and M. G. Durkin, (*J. Parapsychol.*, 23: 49-53, 1959).
19. ESP card tests with and without hypnosis, by J. Fahler, (*J. Parapsychol.*, 21: 179-185, 1957).

- 
20. ESP card tests of college students with and without hypnosis, by J. Fahler and R. J. Cadoret, (*J. Parapsychol.*, 22: 125-136, 1958).
 21. The effects of hypnosis on GESP, by L. Casler, (*J. Parapsychol.*, 28: 126-134, 1964).
 22. *Ibid.*, p. 86.
 23. The Improvement of clairvoyance scores by means of hypnotic suggestion, by L. Casler, (*J. Parapsychol.*, 26: 77-87, 1962).
 24. Separation of high and low scoring ESP snbjects through hypnotic preparation, by C. Honorton, (*J. Parapsychol.*, 28: 250-257, 1964).
 25. A further separation of high- and low-scoring ESP subjects through hypnotic preparation, by C. Honorton, (*J. Parapsychol.*, 30: 172-183, 1966).
 26. The differential response in three new situations by K. Ramakrishna Rao (*J. Parapsychol.*, 28: 81-92, 1964).
 27. The control of psi phenomena, by R. H. Thouless, (*Res. J. Phil. Soc. Sc.*, 1: 71-74, 1963).
 28. ESP card tests with and without hypnosis, by J. Fahler, (*J. Parapsychol.*, 21: 184, 1957).
 29. Training the psi faculty by hypnosis, by M. Ryzl, (*J. Soc. Psych. Res.*, 41: 234-252, 1962).
 30. A case of high-scoring ESP performance in the hypnotic states, by M. Ryzl and Jirina Ryzlova (*J. Parapsychol.*, 26: 153-171, 1962).
 31. Confirmation of ESP performance in a hypnotically prepared subject by M. Ryzl and J. G. Pratt, (*J. Parapsychol.*, 26: 237-242, 1962).
 32. Training the psi faculty by hypnosis, by M. Ryzl.
 33. An attempt to validate the 'Ryzl Technique' for the training of ESP, by J. Beloff and I. Maudleberg, (*J. Soc. Psych. Res.*, 43: 229-249, 1966).
 34. *The Yoga System of Patanjali*. Translated by J. H. Woods, (Cambridge, Mass.: Harvard University Press, 1927, pp. 1-4).
 35. *Christian Yoga*, by D. Dechanet, (London: Burns & Oates, 1960).

36. Voluntary heart and pulse control by yoga methods by M. A. Wenger, B. K. Bagchi and B. K. Anand, (*Int. J. Parapsychol.*, 5: 25-41, 1963).
37. Some aspects of Electroencephalographic studies in yogis, by B. K. Anand, G. S. Chinna and Baldev Singh, (*Electroenceph. Clin. Neurophysiol.*, Vol. 13, 1961, pp. 452-456).
38. Yoga and parapsychology, by G. Zorab, (*Res. J. Phil. Soc. Sc.*, 1: 78-83, 1963).
39. Application of hypnosis in ESP research by M. Ryzl, (Paper read at the Parapsychology Seminar, Andhra University, Waltair, 1966).

LECTURE IV
PARAPSYCHOLOGY AND
THE PROBLEM OF SURVIVAL

LECTURE IV

PARAPSYCHOLOGY AND THE PROBLEM OF SURVIVAL

In his planchette experiments Mr. Nagabhushana Rao talked of invoking the 'spirits'. Also in his experience of the warning about the scorpion by the alleged voice of his deceased friend he rightly wondered about the possibility of the 'spirit' of the deceased person communicating with him. If we believe in the existence of the spirits and their ability to communicate with us, then, the whole range of paranormal communication may be attributed to them. But we need to have first independent evidence for the existence of the spirits.

Does the possibility of mystic awareness, made real by the numerous experimental studies of extrasensory perception, logically lead us to the possibility of the human personality surviving bodily death? In fact, in our country as well as in others there had been cases where a living person is claimed to be an incarnation of a deceased person. Dr. Stevenson made an interesting study of some of these cases. The belief in rebirth is so basic to Hinduism and Buddhism and so much ingrained in our culture, it is important that we consider the implication of the existence of mystic awareness to the problem of survival.

Is mystic consciousness an attribute of the spirit? Does the existence of extrasensory perception imply the existence of spirits? While answering this question we will do well to consider some of the theories advanced to explain the paranormal phenomena like ESP. In parapsychological theorizing we encounter both the spiritualistic and physicalistic explanations.

The spiritualistic hypothesis of paranormal communication by itself is found to be farfetched. According to the spirit hypothesis, a spirit apprehends the information first and then paranormally communicates it to the subject. This argument makes the following assumptions: (1) there are such things called spirits; (2) they possess paranormal powers; (3) they desire to communicate with human beings; and (4) human beings can receive such communications. All these assumptions become gratuitous, if we simply assume the paranormal ability on the part of men.

Another commonsense explanation of a paranormal ability like telepathy consists in assuming some form of energy transmission from one brain to another in a radio-like manner. It has long been known that electrical processes take place in the cerebral cortex. In 1929, Hans Berger¹ showed that rhythmic electrical currents emanate from the brain and that they can be detected at the surface of the scalp by the electroencephalogram, which he invented. This fact suggests the possibility that the brain of the agent may emit electromagnetic waves corresponding to his thought patterns. In a telepathic experiment these waves may be afferently received and interpreted by the subject. Kazhinsky,² for example, believed that telepathy is caused by the transmission of electromagnetic waves between the agent and the subject by means of a process called 'electro-duction'.

One of the objections to a physical theory of telepathy is that, if there is any transmission of energy between two brains, it must be subject to the inverse square law. But it is not known that telepathic communication decreases with the square of the distance between the agent and the subject. Successful experiments have been carried out at great distances, and this has been considered as sufficient justification for regarding psi as a non-physical phenomenon. This objection was answered by Hoffman³ who argued that while the

intensity of an energetic transmission decreases with the square of the distance, as a signalling device, such a transmission is not greatly affected by distance. Moreover, it is possible to intensify the signals weakened by distance in the same way as 'automatic volume controls' are used in radio broadcasts.

The experiments by the Russian parapsychologist L. L. Vasiliev⁴ gave results which refute the electromagnetic theory of telepathy. Vasiliev attempted to induce hypnosis in his subjects by telepathy. In a series of experiments, the subject and the hypnotist were placed in metal cabinets, situated in different rooms, which shielded off any possible electromagnetic waves within the range of ultra-short, short and medium wave-lengths. In a total of 260 trials in which the subjects were telepathically 'told' to go to sleep and awaken, they responded correctly in 90 per cent of the cases. The use of the metal cabinets did not show any diminishing effect on the results. When the experimenter and the subject were separated by as many as 1,700 kilometers, still the subject was successful in responding to telepathic suggestion. Vasiliev's experiments clearly rule out the possibility that any medium, short or ultra-short wave transmission is associated with telepathy. And it has not been shown that the human brain can emit any 'long waves' which can penetrate metal cabinets.

Berger,⁵ who thought that the changes of electrical brain potential were too small to explain telepathy at great distances, postulated a new type of energy which could span immense distances and affect brains without itself being affected by the obstructing objects. Berger hypothesized that the physical changes in one's brain might be transformed into psychical energies which, propagating through space in wave-like manner, could reach another brain and invoke in it mental experiences similar to those of the former.

There is, of course, no evidence that such psychical energies independent of electromagnetic fields exist in the human brain. As Vasiliev⁶ pointed out, the brains and nerves are surrounded by fibres and liquids which possess greater electro-magnetic conductivity than the nerve tissues themselves. This makes any meaningful transmission of electrical potentials from brain to brain rather farfetched.

Another notable attempt to explain telepathy in physical terms has been made by Ninian Marshall.⁷ He points out that just as new physical laws are required to account for the behaviour of sub-atomic bodies and those whose speed approaches that of light, new laws may be required to explain the behaviour of bodies which attain certain levels of complexity. The apparently indeterminate occurrences at the quantum level in very complex structures may be produced by as yet unrecognized forces such as resonance. Therefore, Marshall postulates that two complex structures with a sufficient degree of similarity, such as two human brains, could act on one another by some kind of direct resonance without being subject to the obstructions of space and time. In the words of Marshall, 'any two structures exert an influence on each other which tends to make them become more alike. The strength of this influence increases with the product of their complexities, and decreases with the difference between their patterns'. Resonance of a pattern in one brain with another leads to telepathy. The erratic and often distorted as well as the unconscious nature of telepathy may be explained according to Marshall, by the possibility that the brain may resonate with many other structures, resulting in much loss and distortion of the original information. Marshall goes on to suggest that strong resonance from one brain to another may be facilitated by having close relatives act as the subject and the agent or by using emotionally-toned material for communication.

The difficulty with Marshall's theory, as with all other physical theories, is that in his attempt to find a channel for psi communication, he is led to postulate a causal interaction which does not require a spatio-temporal continuity. Consequently any energetic patterns involved in such communication acquire properties that physical objects are not known to possess. Berger's psychic energy and Marshall's law of resonance, in so far as they transcend time-space obstructions, also transcend physical laws and fail to integrate paranormal phenomenon with the known facts of nature. Furthermore, what kind of transmission is possible between an inanimate object like an ESP card and the subject in a clairvoyance test? A card is not complex enough to resonate, nor does it possess consciousness to produce psychic energy. Telepathy and clairvoyance are not two distinct phenomena, but the same phenomena manifesting under two different conditions.

We find thus that the hypothesis which assumes the existence of spirits as well as those which seek to explain the paranormal on physical models are unsatisfactory.

Several parapsychologists believed that paranormal experiences establish the existence of the minds as separate from bodies. The Edinburgh psychologist, John Beloff, for example, considers parapsychology 'the ultimate battleground on which the mind-body controversy must be fought out. For, if no plausible physical explanation can be offered for what are ostensibly paranormal phenomena, the radical dualist approach would appear to win by default'.⁸ It would not seem that this implication is necessarily true, for Gilbert Ryle's⁹ refutation of the 'double-life legend,' as he called it, does seem to remain unchanged even if one accepts the validity of psychical phenomena, and the implausibility of a 'physical' explanation.

Ryle thought that he exploded Descartes' myth of 'the ghost in the machine' by claiming that the Cartesian conception of

the mind rests on a batch of category mistakes. To conceive of the mind as a substantive entity is like regarding the university over and above the colleges composing it or thinking of a military division as a counterpart of the units that make up a division.

The discovery of new mental operations, like telepathy and clairvoyance, however unlike those we have known before, is like adding a new college to the university or a new unit to the division. The new college may be teaching something drastically different, or the new unit may be doing what is radically new, but the college and the unit do not warrant being called counterparts of the university or of the division, even if they necessitate a new conception of the university or a new definition of the division.

The view that postulates independent substantive existence for minds entangles itself in disturbing logical muddles. First, as Ryle has shown, there can be no sense either in affirming or in denying that minds interact with bodies if both of them are two different kinds of substances enjoying their own peculiar existences. Second, if minds are not extended substances and are not in space, how then can we identify them as distinctive things that could belong to separate bodies? Third, if minds are potentially capable of functioning independently of bodies, why should not they do so more often than recorded? Conversely, why should injuries to the brain, that is body, cause lasting alterations in the mental life of an individual? Finally, if by mental we mean that which is not physical, there seems to be little hope for the study of mental phenomena since such a view does not seem to permit any theoretical development.

Mind is a hypothetical construct that denotes a set of functions attributed to human beings. The dualist hypostatizes functions to be substances and confuses what are predicates with subjects. The attempt to explain the mental by

paramechanical causes is as misleading as the attempts to explain them by mechanical causes.

The temptation to hypostatize mental functions, as constituting an independent substance is linked with our familiarity with mechanical models and our readiness to accept such models as inevitable for any scientific quest. Since telepathy, for example, cannot be caused by a mechanical agency, we conclude it must be caused by a paramechanical agency, but we tend to forget that the concept of causation in its naive sense is not at all applicable to parapsychological phenomena. If it is the case that the subject *S* is able to say what the agent *A* is thinking at a particular time, what then is the cause of *S*'s knowledge? If this is the right question, the cause of *S*'s knowledge must be the act of *A*'s thinking. But, we know that *A*'s act of thinking cannot cause telepathy in *S*, since not only are we unable to discover any causal sequences connecting his thinking and *S*'s extrasensory knowledge of it, but we also know that *S* could do the same thing if *A* were not actually thinking at that time but were to do so at some time in the future.

It would seem that Jung had a better insight into this problem than his critics when he described ESP as synchronicity or a causal relationship. If only Jung's purpose was one of describing and not of explaining psi phenomena, his synchronicity concept would have been helpful in correcting the false emphasis on a causal theory of psi. When we come to those aspects of cognitive behaviour which Professor Polanyi^{10,11} calls tacit knowing, the causal explanation becomes much less convincing.

Tacit knowing, according to Polanyi, consists in the 'capacity for attending from one thing to another'—that is, from a proximal term to the distal term. The perceptual process, for example, consists in the tacit integration of perceptual clues into comprehensive entities. He describes

perception as transposition of feelings. The way we see an object is mainly determined by our awareness of certain events inside our bodies, which are not observable in themselves. In a perceptual process, then, we are attending from the internal processes to the qualities of things outside.

Now if the tacit integration or structuring of perceptual clues that results in meaningful experiences is fundamental for perceptual knowledge, there is no sense in which we can say that the perceptual experiences are produced by the action of material things on our senses. While the perceptual clues may be necessary, on occasions, to have veridical perceptions, they are not sufficient. It is important to note that the clues of the steps involved in tacit knowing need not be identifiable or in some instances may not be even discernible. As Polanyi puts it, 'Tacit knowing will tend to reach conclusions in ignorance of the steps involved.'

Now, if we have no compelling reason in the reality of paranormal occurrences, to assume the existence of spirits or minds which have substantive existence, what becomes of the problem of survival? What is the relationship between parapsychology and the problem of survival or reincarnation?

Recently we have had a spate of newspaper reports on the question of reincarnation by people calling themselves parapsychologists. What is the credibility of these reports? Indeed the problem of survival is one that has been agitating the human mind during all its quest to understand man in relation to this world. What does death mean? Does it annihilate the whole personality, or is there anything left which persists after death? Is it possible for a deceased personality to reborn or to possess another living person?

The survival problem, as it was called, is what led many of the earlier investigators to undertake research in this field. Today, however, only a very small fraction of parapsychologists are working in the area of survival or reincarnation.

The reason mainly seems to me is the lack of appropriate methods of investigation. I shall briefly review the various sources of evidence for empirical possibility of survival and reincarnation.

Empirical considerations of survival raise the following questions. First, what is the evidence for survival?; second, how good is the evidence?; third, if the evidence is good, is survival the only possible or the most probable explanation? The following sources of evidence are usually cited in favour of hypothesis that something in man survives his bodily death: (1) the existence of paranormal phenomena like ESP, (2) spontaneous parapsychical experiences bearing on the question of survival, (3) recurring spontaneous occurrences such as poltergeist phenomena, (4) the alleged controls of mediums (5) the alleged cases of cross-correspondence (6) apparitions and (7) possessions and claimed memories of a former incarnation.

ESP and Survival

As we have seen in the previous lectures there is sufficient evidence to warrant our belief in the existence of such paranormal abilities as ESP. Since ESP apparently involves a method of communication that does not very well fit into the conventional models, are we justified in assuming that there is something in man which is different from matter in virtue of which his personality survives the destruction of the body? In the present state of our knowledge about ESP it is hardly possible to maintain that the existence of ESP logically implies the probability of survival. In fact several of the experiences where a deceased personality is supposed to have communicated with a living person can now be easily explained in terms of telepathy hypothesis without postulating the survival of deceased personalities. But, on the other hand, it may also be argued that if a discarnate agency is ever to

communicate with us such a communication would be made possible only by ESP. That ESP exists is therefore the first base in the march towards survival.

Apart from the spirit hypothesis of telepathy which we have already discredited, there is another theory of mind put forward by C. D. Broad which accommodates paranormal and the possibility of survival. Let us briefly consider this theory.

As early as in 1925, Broad put forward a hypothesis to explain the mind-body relation.¹² Convinced, as he is, of the possibility and the reality of psi as revealed in the spontaneous material and the phenomena of trace mediumship, he directed his hypothesis not only to explain the mind-body relation, but also to accommodate for the paranormal and the possibility of survival. According to this hypothesis, which he called the 'compound theory', the mind is not a single substance. It is a compound of two substances, and neither of them by itself has the characteristics of mind. These two substances, as he called them in 1925, are the 'psychic factor' and the 'bodily factor.'

Such acts as perception, reasoning and remembering are not the functions of either of the factors by itself. Just as a chemical compound possesses characteristics that do not belong individually to either of the constituents, the functions of the mind are not to be found in either of its constituent elements.

Broad goes on to say that the psychic factor could persist even after the cessation of the body after death. When a psychic factor is united with a body, it functions as a mind. So a discarnate psychic factor will not have consciousness. But when a psychic factor is united with a body, certain traces are formed. If it so happens that a psychic factor after its dissolution from the body with which it has so long been associated comes into contact with any one of the living organisms, as would be in the case of an entranced medium,

the newly formed mind of the medium may, in virtue of the impressions this psychic factor had in the form of traces, recall the experiences of the deceased person with whose body the psychic factor had an occasion to associate.

It is possible to extend this hypothesis and argue that the psychic factor has also the paranormal abilities. How would these abilities function? We have to assume that the psychic factor goes out to reach for the object in paranormal operations like clairvoyance or that it is in constant touch with all things at all times. If we assume the former, we have to argue that when a thought, memory, or an experiential event is extrasensorially transferred from one person to another, as in telepathy, the psychic factor in the mind of the former must have come into contact with the body of the latter replacing its mind temporarily. But this could be possible, so far as we know, only if one of the persons involved in the situation were deceased or if he temporarily lost his mind or were at least in the state of deep sleep. That this is not the case in successful ESP experiments and even in some spontaneous cases argues against the plausibility of this alternative. If we admit the second possibility, and assume a sort of potential omniscience on the part of the psychic factor, then there would be no need for any traces in the psychic factor in order to recall the experiences, since it is actually in touch with all that is.

Spontaneous Experiences Bearing on Survival

These are the cases in which a deceased personality is alleged to have communicated a piece of information to a living agent. There are a large number of cases which fall into this category. The main difficulty in placing too much confidence in these spontaneous cases is our understandable inability to assert or deny the factuality of the reported experiences. These experiences could, of course, be evaluated

in the same manner as any verbal testimony can be evaluated. But, some parapsychologists have not found that the time and effort spent on validating personal experiences is worth the trouble. The more profitable course of action, it is suggested is to collect numerous cases and study their apparent similarity with the expectation that the common characteristics running through a great many cases are less likely to be due to human frailties of various sorts. However, there are others like Stevenson who hold that a careful in depth study of spontaneous cases is necessary and useful.

Apart from the lack of conclusiveness, the main difficulty with spontaneous experiences bearing on survival is the fact that most, if not all, of these experiences can be explained on the basis of known parapsychical abilities of the living without assuming the survival of a deceased personality, unless one is willing to defend a spiritualistic hypothesis of telepathy. But we have seen how the spirit hypothesis of telepathy is farfetched.

Louisa E. Rhine,¹³ whose study of spontaneous cases is perhaps the most well-known of its kind, analyzed the cases bearing on survival in her huge collection. She tried to find out whether the initiative for the experience rests primarily with the living agent or with the deceased person, assuming that if the latter is the case it is more likely that the communication comes from the deceased. She found several spontaneous experiences which seemed to suggest on the surface that the deceased personality had induced the experience. But, on further analysis, it appeared that in most of the cases bearing on survival, the initiative of a living agent could not be completely eliminated. She recognized, however, that there were a few cases in which the initiative of the deceased person seemed the only possible explanation. Thus while Mrs. Rhine's collection does not provide any tangible

evidence for survival, it keeps the question of survival still alive.

Recurrent Spontaneous Occurrences

Recurrent occurrences of the poltergeist type involving physical disturbances associated with a particular house or place and occurring over an extended period of time are sometimes regarded as the mischief of discarnate spirits. But unfortunately, most of the poltergeist reports are inconclusive as to the agency responsible for these effects. In some instances, it is reasonable to assume that some maladjusted person in the family or in the neighbourhood is responsible for the disturbances. In some others, natural causes, like underground water, may have caused them. And in those few cases in which the effects are more likely parapsychical, it is not possible to eliminate the hypothesis that these occurrences are due to the exercise of parapsychical abilities by living persons rather than the dead.

The Alleged Controls of Mediums

The essential feature of a medium in a trance state is a kind of dissociation. In the majority of cases, the normal personality of the medium seems to be obliterated and a secondary personality takes its place. Many mediums claim that during the entranced state they are in the possession of some discarnate agency in the form of controls which are alleged to give the ostensible parapsychical information. One cannot really take these claims too seriously because, first, there were mediums like Madame Morel (studied by Osty) who never claimed to have had any controls. Second, there is much evidence to show that the alleged spirit controls are only psychological constructs of the medium. Third, most of the impressive evidence from mediums has been obtained under conditions which have not excluded fraud or other

alternative explanations. Today we have good methods of evaluating the mediumistic phenomena,¹¹ but there does not seem to be the same interest in studying mediums.

Finally, most of the mediumistic material can be explained, if we assume that the medium has paranormal abilities. Consider, for example, the following case which, on the surface, looks like pretty convincing evidence in favour of the survival hypothesis. It is reported that Soal obtained through Mrs. Cooper, a medium, a communication purported to have come from his friend Gordon Davis, who was believed to be dead. The voice and the mannerisms of the medium when this communication was received, were strikingly similar to those of Gordon Davis. Soal was indeed led to believe that the communication was really from his friend. The information obtained through Mrs. Cooper also tallied significantly with Soal's knowledge of Davis. The astonishing feature of this case is that it was found later that Davis had not really died but was still living.

There are, however, cases like the "Lethe" case in which the deceased spirit of Myers was alleged to have communicated through Mrs. Piper. The case is indeed impressive as to the detail and richness of the material received in the form of allusions that did not certainly seem intelligible to the medium or the sitters at the time of receiving them. Considerable research had to be done to discover the bearing of these allusions on the message in point. These cases are indeed intriguing and deserve careful study.

Cross-correspondences

The cases of cross-correspondence are often cited as evidence of survival. The cross-correspondence cases are those in which the same message purported to come from a single discarnate agency may be obtained through the automatic writings of several sensitives. What one sensitive has written

may be a continuation, repetition, or illustration of what some other sensitive has produced in her automatic writing. One main difficulty with the cross-correspondence cases is that it is difficult to evaluate the significance of the correspondence, since a certain number of correspondences can always be expected by chance alone.

Two scripts written at random may contain many similarities if the interpreter takes the trouble to find them. The reported studies of cross-correspondence cases seldom had any controls to eliminate this possibility. It is also very difficult to eliminate the hypothesis of telepathy from some living agent. The fact that these messages are often communicated in a disguised fashion does not give them any special status different from ESP, since we do know that ESP itself is manifested in a number of disguised forms.

Apparitions

The most dramatic type of spontaneous paranormal experience bearing on survival are apparitions. While most of the genuine apparitions may be explained as telepathically induced hallucinations, there are some which seem to be so realistic and impressive that they are taken as some sort of transported spirit-images involving true exteriorization. Here again it is not theoretically necessary to assume another type of objective existence indicating a personality that can survive outside one's body unless the observed effects cannot be explained by assuming parapsychical powers.

Reincarnation cases

The best and perhaps the most reliable study of alleged reincarnation cases was made by Professor Ian Stevenson of the University of Virginia. In his book *Twenty Cases Suggestive of Reincarnation*,¹⁵ Stevenson reports his studies of seven cases from India, three from Ceylon, two from Brazil, seven from Alaska, and one from Lebanon. After carefully

considering various alternate hypotheses to explain the alleged memories of previous incarnation, the tallying of the birth marks, etc., Stevenson concludes that reincarnation is the most plausible hypothesis for understanding the cases he studied, even though he recognises that the cases taken collectively or individually do not prove reincarnation.

The following is a summary of the case of Prakash as reported by Stevenson:

In April, 1950, a boy of ten named Nirmal, son of Sri Bholanath Jain, died of smallpox in his parents' home in Kosi Kalan, a town in the District of Mathura, Uttar Pradesh. On the day of his death he had been delirious and irritable. He said twice to his mother: 'You are not my mother. You are a Jathi. I will go to my mother.' As he said this he pointed in the direction of Mathura and another smaller town in the same direction called Chhatta, but he did not mention either town by name. (Chhatta lies six miles away from Kosi Kalan on the road from Kalan to Mathura.) Shortly after making these strange remarks, he died.

In August, 1951, a son was born to the wife of Sri Brijlal Varshnay in Chhatta whom they named Prakash. As an infant Prakash was noted to cry much more than other children, but otherwise he showed no unusual behaviour until the age of about four and a half. At that time he began waking up in the middle of the night and running out of the house to the street. When stopped, he would say he 'belonged in' Kosi Kalan, that his name was Nirmal, and that he wanted to go to his old home. He said his father was Bholanath. He woke up and started to run away like this four or five nights in a row and then somewhat less frequently, but continuing to do so for a month altogether. He importuned his family to take

him to Kosi Kalan so strongly that one day in 1956 (in the hope of quieting him) his paternal uncle took him on a bus going away from Kosi Kalan, i.e., in the direction of Mathura, Prakash, however, immediately pointed out the error and cried to go to Kosi Kalan. His uncle then put him in the correct bus and took him to Kosi Kalan. He went to the shop of Sri Bholanath Jain, but did not recognize Sri Jain's shop, perhaps because the shop was closed at the time due to Sri Jain's absence. And for this reason also he did not meet the Jain family during that visit. The Jain family did learn, however, of his visit to Kosi Kalan.

At this time, in 1956, when he was about five years old, Prakash's apparent memories of life as Nirmal were extremely vivid. He recalled the names of Nirmal's relatives and friends which on his second visit to Kosi Kalan five years later he no longer remembered. After returning from Kosi Kalan the first time, he continued to trouble his family with his desire to return there. They adopted various measures in an effort to make him forget about Nirmal and Kosi Kalan. These included turning him counter-clockwise on a potter's wheel, supposedly to impair memory, and eventually they beat him. After some time he seemed to forget, or at least no longer spoke openly of his wish to return to Kosi Kalan.

In the spring of 1961, one of Sri Bholanath Jain's younger sons, Jagdish (older brother of Nirmal), lost by death one of his sons, a boy of three and a half. Sri Jagdish Jain shortly afterwards moved back to Kosi Kalan from Delhi, where he had been living. In Kosi Kalan he heard about the boy in Chhatta who said his name was Nirmal and that he was the son of Bholanath

Jain. In the early summer of 1961, Sri Bholanath Jain was in Chhatta on business with his daughter Memo. There he met Prakash, who recognized him as his 'father'. Prakash also partially recognized Memo, mistaking her for another sister of Nirmal named Vimla. He begged Sri Bholanath Jain to take him to Kosi Kalan. He went down to the bus station as Sri Jain and Memo were leaving and pleaded to go with them. Some days later, Nirmal's mother, older sister Tara, and brother Devendra visited Prakash in Chhatta. Prakash wept with joy when he saw Nirmal's older sister Tara. He begged his father to take him to Kosi Kalan. The Jain family persuaded Prakash's parent to consent to his visiting Kosi Kalan again. Prakash led the way from the bus station to the home of the Jains in Kosi Kalan. Arrived there, he hesitated at the entrance, which had been radically altered since the death of Nirmal. At the house, Prakash recognized Nirmal's other brother, two aunts and some neighbours, as well as various parts of the house where Nirmal had lived and died.

Nirmal's family are satisfied that he had been reborn as Prakash.¹⁶

One of the foremost critics of reincarnation hypothesis is our Professor C. T. K. Chari of Madras Christian College, one of the most distinguished philosopher-parapsychologists in the world today. Dr. Chari points out that Stevenson's is an *ex post facto* research, and says: 'Stevenson's whole procedure consists of summary statements of alleged empirical relationships and so seems to contain a minimum of inferential commitments. But without definite hypothetico-deductive commitments, no falsification or verification of reincarnation is possible. Three hundred or even six hundred cases will carry us no where.'¹⁷

Pointing out the fact that Stevenson's ignorance of Asiatic languages and his obvious dependence on translators and interpreters is a source of weakness in his study, Chari seems to think that there is a relationship between belief in reincarnation and the occurrence of the alleged cases of reincarnation. He points out that a great many of the reincarnation cases come from North India and that the South Indian cases have been very very few and unconvincing. Chari goes on to argue 'India's notoriously "pro" attitude toward reincarnist beliefs may unconsciously and systematically influence the testimony of parents and interested bystanders.'¹⁸

Chari also argues that Stevenson 'underestimated the range of paranormal cognition and its high degree of selectiveness,' and that psychometric GESP is more likely to be the explanation in these cases than reincarnation. Psychometric GESP, according to him, is a sort of comprehensive paranormal cognition 'which utilizes, with varying degrees of success, a person or an object as a link or intermediary in order to derive, in a selective fashion, certain features of the past, present and future history of either absent persons or absent objects associated by spatio-temporal contiguity or by psychological bonds (such as interest and emotion) with the link or intermediary'.¹⁹

This is not to say that all evidence of reincarnation we have so far is irrelevant. Some peculiar characteristics that are reported to have been manifest in some alleged reincarnation cases are worth pursuing further. The ability to speak in languages not known to the agent (xenoglossy) is one of those. While it is possible to cross the barriers of language by means of extrasensory perception, we still have no evidence that the ability to speak an unknown language can also be acquired by means of ESP. There are similar cases in which the subjects perform skills which they have never learned before, ostensibly by the invasion of a spirit or because

these skills were learned in the previous birth. Since, as far as our present knowledge goes, at least some of our skills cannot be acquired by a mere knowledge of them without the necessary practice, if one can exhibit mastery of a skill which he could not conceivably have learned before, it is argued, then there is a reasonable case for the surviving personality. This is the line of argument pursued by C. J. Ducasse.

In a paper, 'What would Constitute Conclusive Evidence of Survival,' Ducasse²⁰ argued that ingenious feats of invention and constructive activity reported in some cases cannot be explained on the hypothesis of ESP, for something different from ESP in kind seems to be involved. As far as our knowledge of ESP goes, we have access only to items of information. In those cases in which the knowledge possessed consists of mental skills, as in the case of responsive xenoglossy something more than ESP is involved, since apart from these cases, there is no evidence that ESP can accomplish these feats.

Undoubtedly, cases of responsive xenoglossy and those involving the exhibition of unlearned skills are indeed impressive, if their authenticity can be taken for granted. It seems, however, that a survivalistic interpretation of such cases involves a basic contradiction. In order that the display of an unlearned skill may be construed as evidence of the intervention of a surviving agency, one would have to assume that these skills cannot be acquired except by practice. In the acquisition of skills, the practice necessarily refers to the co-ordination of muscular and other bodily activity and not exclusively to the mind of the person acquiring the skill. How, then, can we say that possession by another mind can help one acquire a skill? Also, if it is assumed that the skill is actually learned by the mind and not the body (an assumption which it is difficult to substantiate), why then do most of us need to learn again all the skills which our minds must have learned in their previous incarnations? At least in those

alleged cases of reincarnation, we should find that all these skills acquired in the previous incarnation are present. The logical difficulties thus make us wonder whether these impressive cases may in fact suggest, instead of a surviving agency, a more pronounced or marked paranormal ability which can accomplish these impressive skills without practice.

At the present stage, therefore, it would seem that there are two types of observational evidence bearing on survival. First, we can collect spontaneous cases in which the motive and the initiative seem to come from a deceased person. If there are a sufficiently large number of such cases, a study of them may give us clues that are experimentally verifiable. The fact that there are a few in the existing collections is sufficient reason to look for more. Second, we may carefully study cases of xenoglossy and unlearned skills and also whether these can be explained by ESP. For the present, however, the prospect of obtaining any conclusive evidence for survival is by no means good. On the one hand, there is need for determining the limits of psi—what it can achieve and what it cannot achieve. On the other hand, a breakthrough in methodology is required to quantify survival evidence. The work of Stevenson is the most promising so far. But it is still a long way before we can reasonably be convinced of the possibility of survival or rebirth.

Now, it may be asked, if parapsychological phenomena do not prove the existence of mind as a self-subsisting entity, and its possible survival after bodily death, what difference do they make to our understanding of the nature of man? The answer is clear. Parapsychological findings question the absolute applicability of the notions of mechanical causation to the understanding of the nature of man. In so doing, they help to shift our attention from a notion that would represent man as a creature whose behaviour can only be understood in terms of the external conditions and circum-

stances impinging on him to a notion which makes man the center of study in understanding the ways in which he interacts with his environment and the ways he effects changes in it. The limitations that are found in the world around him should not cripple man. On the contrary, the potentialities within him should help transform the world.

The great potentialities of man lay in his superior nature marked by the higher levels of his experience. The studies of parapsychologists have made it reasonable to assume the existence of the paranormal and the mystic level of experience. By paying more attention to this aspect of our nature and by developing it further we would be able to achieve what we could never achieve through other sciences, viz., the integration of the individual with the universe. For mystic awareness transcends physical barriers. Mystic awareness is the cognitive aspect of mystic consciousness, and the discovery of its reality by the parapsychologists may well prove to be one of the most significant discoveries of this century.

REFERENCES

1. *Psyche*, by H. Berger, (Jena: Verlag Gustav Fischer, 1940)
2. *Biologicheskaya Radiosvyaz*, by B. B. Kazhinsky, (Ukrainian Academy of Sciences, 1962).
3. ESP and the inverse square law, by B. Hoffman, (*J. Parapsychol.*, 4: 149-152, 1940).
4. *Experiments in Mental Suggestion*, by L. L. Vasiliev, (Church Crookham: Institute for the study of mental images, 1963).
5. *Psyche*, by H. Berger.
6. *Experiments in Mental Suggestion*, by L. L. Vasiliev.
7. ESP and memory: a physical theory, by N. Marshall, (*Brit. J. Phil. Sci.*, 10: 265-286, 1960).
8. *The Existence of Mind*, by J. Beloff, (London: MacGibbon and Kee, 1962), p. 229.
9. *The Concept of Mind*, by G. Ryle, (New York: Barnes and Noble, 1962).

10. *Personal Knowledge*, by Polanyi (Chicago: University of Chicago Press, 1958).
11. *The Structure of Tacit Knowing*, by M. Polanyi (Manuscript of a lecture delivered at Duke University, Durham, N.C., 1964).
12. *Mind and Its Place in Nature*, by C. D. Broad, (New York: Humanities Press, 1951).
13. *Hidden Channels of the Mind*, by Louisa E. Rhine (New York: Sloane, 1961).
14. Appraising verbal test material in parapsychology, by J. G. Pratt, and W. R. Bridge, (*J. Parapsychol.*, 12: 236-256, 1948).
15. *Twenty Cases Suggestive of Reincarnation*, by Ian Stevenson (New York: American Society for Psychical Research, 1966).
16. *Ibid.*, pp. 20-22.
17. Reincarnation: New light on an old doctrine, by C. T. K. Chari (*Inter. J. Parapsychol.*, 9: 217-222, 1967), p. 220.
18. *Ibid.*, p. 218.
19. Paranormal cognition, survival and reincarnation, by C. T. K. Chari (*J. Amer. Soc. Psych. Res.*, 56: 158-183, 1962), p. 159n.
20. What would constitute conclusive evidence of survival? by C. J. Ducasse (*J. Soc. Psych. Res.*, 41: 401-406, 1962).

SUGGESTED READINGS

Books

- Hart, Hornell, *The Enigma of Survival*. Springfield, Ill.: Charles C. Thomas, 1959.
- Murphy, Gardner, *Challenge of Psychical Research*. New York: Harper and Brothers, 1961.
- Myers, F. W. H., *Human Personality*. 2 Vols. New York: Longmans, Green & Co., 1954.
- Rao, K. Ramakrishna, *Experimental Parapsychology: A Review and Interpretation*. Springfield, Ill.: Charles C. Thomas, 1966.
- Rhine, J. B., *The Reach of the Mind*. New York: William Sloane Associates, 1947.
- Rhine, J. B., and Pratt, J. G., *Parapsychology*. Springfield, Ill.: Charles C. Thomas, 1957.
- Rhine, L. E., *Hidden Channels of the Mind*. New York: William Sloane Associates, 1961.
- Schmeidler, G. R. and McConnell, R. A., *ESP and Personality Patterns*. New Haven: Yale University Press, 1958.
- Soal, S. G. and Bateman, F., *Modern Experiments in Telepathy*. New Haven: Yale University Press, 1954.
- Stevenson, I., *Twenty Cases Suggestive of Reincarnation*. New York: American Society for Psychical Research, 1966.

Journals

- Journal of Parapsychology* (The Parapsychology Press, College Station, Durham, N.C. 27708, U.S.A.).
- Journal of the American Society for Psychical Research* (American Society for Psychical Research, 880, 5th Avenue, New York, N.Y. 10021, U.S.A.).
- Journal of the Society for Psychical Research* (Society for Psychical Research, 1 Adam and Eve Mews, London, W. 8. U.K.).
- Parapsychology Review* (Parapsychology Foundation, Inc., 29 West 57th Street, New York, N.Y. 10019, U.S.A.).

AN APPEAL

Our country has a reputation of being the land of yogis, *mahatmas* and miracle men. Stories of people performing miracles and of instances of paranormal experiences such as telepathy, clairvoyance, materialization, teleportation, levitation, and miracle healing, etc., are too numerous and frequent. If there is any truth in at least some of these cases, it is of great significance and is potentially capable of revolutionising science and our outlook. It would necessitate for one thing the postulation of a new energy system that is infinitely different from those known to us.

Having in mind the potential importance of psychic phenomena of this sort, we are collecting information about yogis, *swamijis*, *siddha purushas* and even common and ordinary people who have had supernormal experiences and those who are able to perform things which are ordinarily considered to be impossible to happen or difficult to explain within the framework of current science.

If any of you happen to be one endowed with these powers or knows someone who has these powers we would like to hear from him. It would help if he briefly writes about the nature of the experience or the power and whether he would be willing to meet us and possibly permit us to witness it, if it is something reproducible. Correspondence concerning this may please be addressed to the Head of the Department of Psychology and Parapsychology, Andhra University, Visakhapatnam-3.

GLOSSARY

- Agent:* The person whose thoughts or mental states are targets for the subjects.
- Call:* Subject's response. Usually the symbol called or written by the subject in attempting to identify the target.
- Clairvoyance:* ESP of objects and events as distinguished from ESP of thoughts and mental states of persons.
- Deviation:* The amount by which an observed number of hits or an average score varies from the mean chance expectation or chance average. A deviation may be total (for a series of runs) or average (per run).
- Differential response:* An often-observed tendency to score positively on one condition and negatively on the other in the same experiment consisting of two different conditions such as two kinds of targets.
- Displacement:* ESP responses to targets other than those for which the calls were intended.
- ESP (extrasensory perception):* A cognitive ability which does not seem to involve any known sensory mediation or rational inference.
- ESP cards:* Cards, each bearing one of the following five symbols: star, circle, square, cross and waves (three parallel wavy lines).
- GESP (general extrasensory perception):* An experimental technique which permits both clairvoyance and telepathy to operate.
- Language ESP:* An ESP test in which words (usually in a language not known to the subject) are used as targets.
- Paranormal:* Parapsychological.
- Parapsychology:* A branch of psychology which deals with those aspects of cognitive and kinetic behaviour that do not seem to involve any hitherto known modes of sensory-motor participation.
- PK (Psychokinesis):* The direct mental influence on a physical object.

Precognition: ESP of a future event.

Preferential effect: A differential response which seems to be manifested when the subject is presented with two kinds of conditions such as two sets of targets.

Psi: A general term for parapsychological phenomena.

Psi-missing: Exercise of psi ability in a way that avoids the target the subject is attempting to hit.

Psychical research: Parapsychology.

Retrocognition: ESP of a past event.

Run: A group of trials, usually the successive calling of a deck of twenty-five ESP cards or symbols. In PK tests, twenty-four single die throws regardless of the number of the dice thrown at the same time.

Score: The number of hits made in any given unit of trials.

Total Score: Total of scores made in a given number of runs.

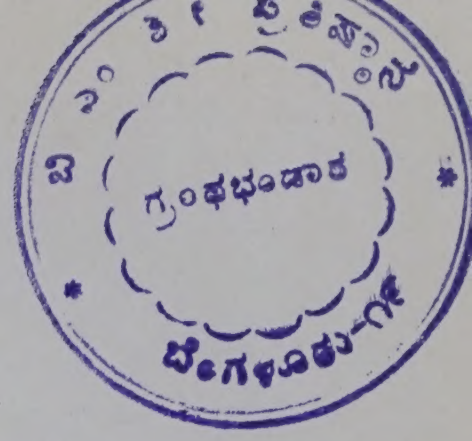
Average Score: Total score divided by number of runs.

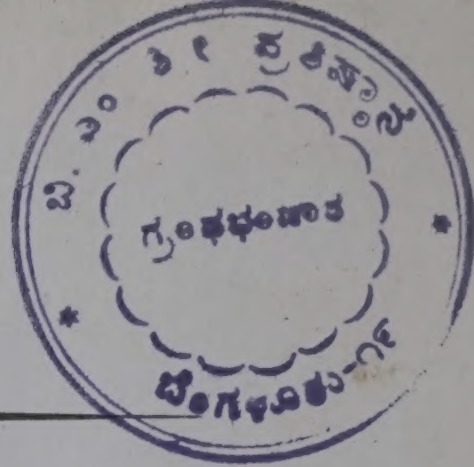
Significance: A numerical result is significant when it equals or surpasses some criterion of degree of chance improbability. The criterion commonly used in parapsychology today is a probability value of .01 or less.

Subject: The person who is tested for his psi ability.

Target: In ESP tests, the object of the subject's response. In PK tests, the object which the subject attempts to influence mentally.

Telepathy: ESP of thoughts and mental states of another person.





OTHER SPECIAL LECTURES

Kashmiri Literature

J. L. KAUL

Non-Alignment: India and the Future

M. S. RAJAN

The Enlightened One

ACHARYA BUDDHARAKKHITA THERA

Some Aspects of Urbanisation

V. L. S. PRAKASH RAO

Distribution of the World's Mineral Wealth

K. RAJAGOPALA SWAMY

Our Plans—Their Achievements and Shortfalls

M. GOVINDA REDDY

When there was no Democracy

L. SRIKANTAIAH

A New Approach to the Science of Language

K. H. KRISHNA MURTHY

Creative Role of the Supreme Court of India

T. S. RAJAGOPALA IYENGAR